

The
CABLE
1924



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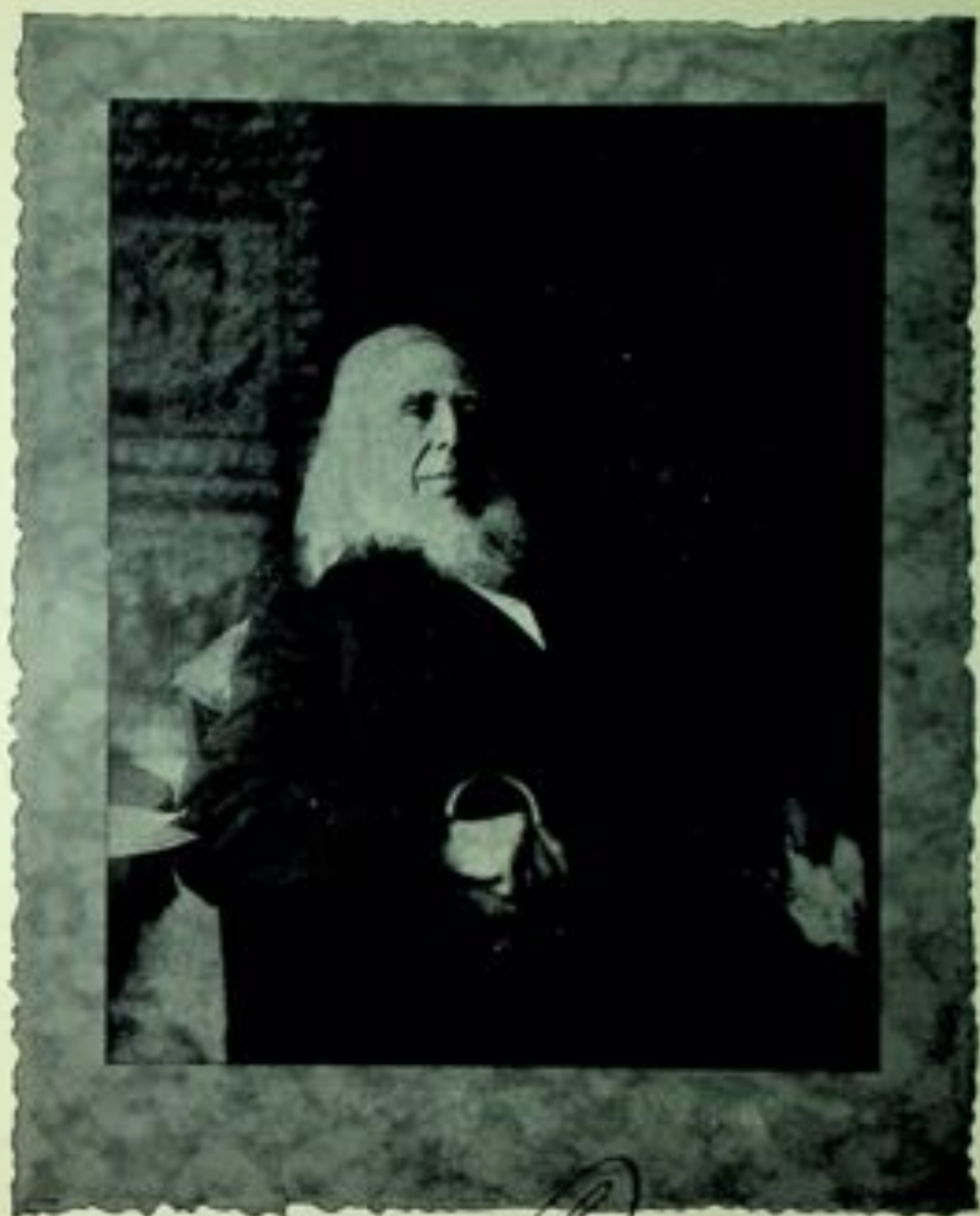
The year-book of
COOPER UNION

published by
THE JUNIOR CLASSES

STUDENT
MECHANIC
MERCHANT
PATRIOT
SCIENTIST

PHILANTHROPIST





Peter Cooper

THE BOARD OF EDITORS

deems it a privilege to dedicate

THE CABLE OF 1924

to one who, as a teacher, has made his subject not a dry discourse, but an absorbing and vital reality; as a scientist has done much to advance knowledge in its many branches; as a philosopher has borne with tolerance and fortitude the blows that only a teacher receives; as a man has won in the hearts of his students a place which he will occupy long after they have left him and has aroused in them an affection and appreciation that will grow with their maturing realization of true worth . . .

PROFESSOR ALBERT BALL.



ALBERT BALL

In Charge of Department and Professor of Physics.

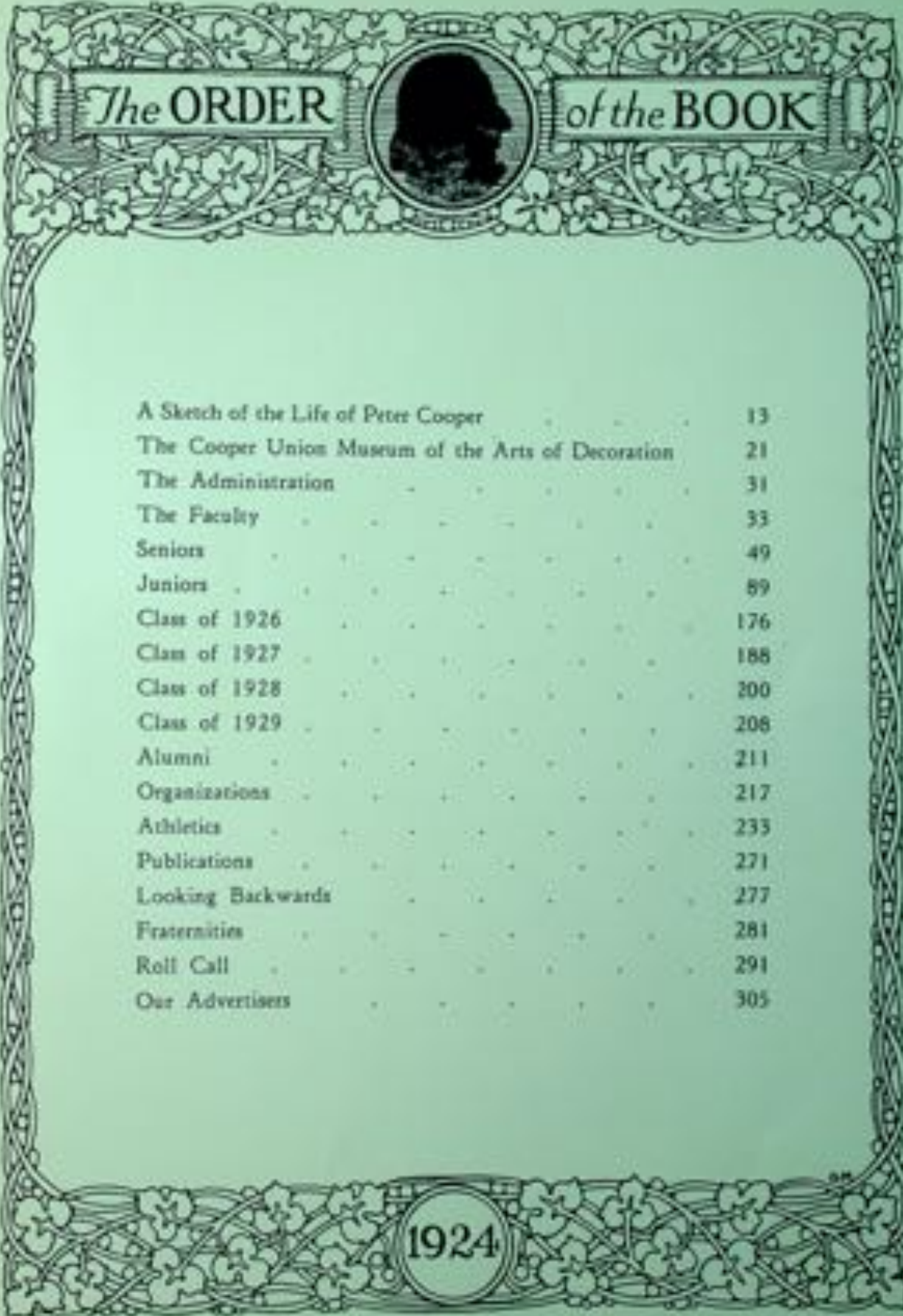
Sigma Psi; A.B., Cornell University, 1901; member: American Physical Society, American Association for the Advancement of Science, Society for Promotion of Engineering Education; associate member: American Institute of Electrical Engineers. Appointed Instructor in Experimental Physics at Cooper Union in 1903. Appointed Assistant Professor of Physics and Electrical and Mechanical Engineering in 1908. In charge of Department and Professor of Physics in 1912.

ALBERT BALL, was born in Perryburgh, Cattaraugus County, N. Y., July 14, 1873. He began teaching at the age of seventeen, and a year and a half later entered the Fredonia Normal School. After graduation he resumed teaching and soon became Principal of the Belmont High School. This position he left at the age of twenty-four, to enter Cornell. He distinguished himself while at college by making his freshman crew and speaking on the '86 memorial stage. His extreme aptitude for "logarithms and functions, dynes and ohms," brought him, along with his diploma in arts, special mention in mathematics and physics.

"He will teach," said his class history of Professor Ball,—and thousands of students will aver he has taught. He graduated in the fall of 1901 and began teaching at Pratt Institute. He left that school for Cooper in 1903 to begin what has proven to be a very successful, and we hope will be a very long pedagogic career.

The Cable Board seeking an opinion on the work of Professor Ball, based on a better knowledge and broader view than its own, has obtained the following authoritative statement:

"Throughout the entire time of his connection with Cooper Union, Professor Ball has devoted himself steadfastly and unselfishly to his work. During the last twelve years, as Head of the Department of Physics, he has proven himself, not only an able executive and versatile teacher, but he, also, through his scientific attainments, has been a continued source of inspiration to his instructors as well as to his students; and, furthermore, as a member of The Faculty, through his loyalty to the Institution and his high educational standards, Professor Ball has made himself invaluable to the Schools of Science of Cooper Union."



The ORDER



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1924

FOREWORD

IN collegiate annuals, the editorial board is indebted to the student body to the extent of compiling information of activities and other reminiscences concerning school life of the past year and publishing the same in the form of a book, to be a proper, valuable and permanent addition to their libraries.

The Editorial Board of the 1924 CABLE has put forth its best efforts to establish a criterion, and sincerely hope that this "Cable" will be a constant source of pleasure and happiness in years when it will be more appreciated.



COOPER UNION
for the
ADVANCEMENT OF SCIENCE
AND ART



COOPER UNION
for the
ADVANCEMENT of SCIENCE & ART
EIGHTH ST. ENTRANCE

A Sketch of the Life of Peter Cooper

PERHAPS no other institution has realized its founder's ideals to so great an extent as COOPER UNION. COOPER UNION is a unique institute and its uniqueness can be traced directly to the character and personality of PETER COOPER.

Born February 12th, 1791, in New York, which at that time was but a struggling unkempt town, he became a considerable factor in transforming it into the commercial and financial centre of the Western Continent.

The father of PETER COOPER was a hatter of limited means, and his son, early in life, was required to assist him in the business. Here, while the boy worked through the long day at his bench, in his mind was germinating the project whose fruition has proved of such supreme importance to the city of his birth, and which has gone so far towards solving many of the problems of poverty, ignorance and vice which are attendant to any large community.

During his boyhood young Peter enjoyed but a few weeks of schooling, and that only in a primitive school-house near Peckskill, N. Y. It was this very lack of early advantages that made him resolve to help the struggling youth of future generations. Although hospitals, orphan asylums and other benevolent institutions were in existence at that time, very few attempts had been made to encourage industry or to give opportunity to those who desired to help themselves.



NEW YORK AT TIME OF PETER COOPER'S BIRTH

That PETER COOPER was an inventive genius is evidenced by the many inventions credited to his name despite the fact that he had no technical training whatsoever. When a boy he invented a washing machine and a machine for mortising hubs. What education he did possess was afforded him by the many occupations he had been engaged in, thus his knowledge was of life, rather than that of books. He pursued the various vocations of hatter, carriage maker and mechanic and at different times engaged in manufacturing glue (in which pursuit the foundation of his wealth was laid), kept a grocery store and later was owner of an iron foundry and also a steel rolling mill. Each time the opportunity of bettering his business connections presented itself he quickly seized it.

One instance of the continuous interest he took in public affairs and of the energy he displayed in promoting every scheme of national and municipal benefit is, that of the financial support he gave toward the laying of the Atlantic Cable. Although at great personal risk to himself, he continued to supply much needed funds until the project was successfully completed.

During all these years Cooper harvested wealth, not to hoard it, but as a necessary means toward the materializing of his youthful dream of founding an institution which would provide ambitious young men in straitened circumstances with the education that had been denied him.

Cooper Union is the great achievement of a great mind and character. It is the development of the educational scheme of PETER COOPER, that took shape gradually in his mind.

In 1853 as soon as he felt that he was financially capable of completing it, he commenced work on what is now known as the Foundation Building of the Cooper Union. Here, in the actual construction of the building his experience as a practical mechanic stood him in good stead. The building that was erected under his constant supervision was the very embodiment of the plans and ideas he had so long nourished.

This history of PETER COOPER is necessarily brief. His was a varied one and an exhaustive account of it would require a volume to do it justice. One may think we have dwelt overmuch on the subject of Cooper Union, and have overlooked some of the other important events that occurred in his life, but can a history of the life of PETER COOPER be complete without some ac-

PARKER's
Mail Stage,
From Whitehouse to Canajoharie.



THE Mail leaves Whitehouse every Monday and Thursday, at four o'clock P. M. and proceeds to Old Fort Schuyler the same evening; next morning starts at four o'clock, and arrives at Canajoharie in the evening; exchanges passengers with the Albany and Cooperstown Stage, and the next day returns to Old Fort Schuyler.

Fare for passengers, Two Dollars; room for passengers, Four Pence per mile; 14th baggage gratis; 150 and under the same as a passenger.

Tickets may be had by applying at the Post-Office, Whitehouse, at the house of the Subscriber, Old Fort Schuyler, or at Captain Roof's, Canajoharie.

JASON PARKER.

April, 1855.

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count of Cooper Union entering into it? PETER COOPER, COOPER UNION, they are almost synonymous. He breathed and lived COOPER UNION. Almost from the start we see where the one great dominating thought in his mind was that of founding a school, which should serve as the ladder on which those who lacked the means, but were possessed of the ambition, could climb to success.

It is hard for us, living in these days when the value of education is so generally recognized, to conceive of the magnitude of the task PETER COOPER set for himself. Above all he was not an idealist. In the course of his life he had mingled with all sorts and conditions of men. Both as a poor boy, accustomed to work and to hardships, and as an inventor and a large employer of labor, he had obtained a knowledge of the wage-earners, of the ambitions of impoverished youth, and their lack of opportunity to lift themselves to affluence, that was probably unequalled by any citizen of his day. Thus he could clearly distinguish between the idealistic and the practicable. He did not call on the public to support his scheme either morally or financially. COOPER was not constituted that way, for, if he had waited for either the monetary or moral assistance of the people, he probably would never have accomplished what he did.

In the first place, at that time, it was the widespread belief that to put education within reach of the masses was the worst thing possible. There existed a distinct line between the laboring classes and the wealthier people. If such a plan were allowed to take shape, the difference between them would have become less marked, a thing not to be thought of. This wealthier class of people were of the unanimous opinion that the system then employed in the south by which slaves



HEWITT MEMORIAL BUILDING

were forbidden to learn to read or write, should be applied to freedmen of the laboring class in the north. That this education was to be bestowed free, was another cause of distrust, for it was said that that would help to pauperise the masses, and still further opposition was aroused when it became known that young men of every race and creed were to share its benefits.

Then again, it was thought that this was a new money making, instead of a beneficial, scheme. After the school was built, the fact that the entire top floor was leased to the American Bank Note Company and part of the first as well as the whole of the ground floor to other mercantile establishments, seemed to prove this latter theory. It was not until the crowds of students began to come and go that public sentiment changed.

COOPER UNION when completed, was, with the exception of certain churches and the City Hall, the tallest edifice in the town. Within its walls lies the genesis of the modern commercial skyscraper. It was the first thoroughly fire-proof building of steel and cement construction ever built. It contains the first elevator shaft, running from the top to the bottom of the building, ever installed. The elevator was then unknown, but that it would some day become an accomplished fact was clearly foreseen and provided for by PETER COOPER. The "Great Hall" was the first public hall built to render disaster from panic practically impossible,



ASTOR PLACE, 1860

by placing it in the basement with all means of egress leading upstairs over stone steps, so that those fleeing, in the event of a calamity, would not be trampled under foot.

All these innovations that are found in COOPER UNION are due entirely to the foresight and wisdom of its founder, PETER COOPER, and the rare judgment displayed in the selection of its site is also his. Time has proven how exceptional that judgment was. Because of its central downtown location, COOPER UNION can be easily reached by young men and women, residing not only in the whole of Greater New York, but in parts of New Jersey, as well as some of the suburbs of New York.

Of the extent of the curriculum of COOPER UNION little need be said save that, but few changes have been made in the original one PETER COOPER planned. Additional subjects have been introduced, true enough, but the fundamental idea of PETER COOPER has been closely followed.

There were men who have had great monuments erected to them by an appreciative people, but few of these compare with the one which the hearts of the countless men and women, both young and old, who knew him in life, or who came in contact with him in business or socially and those also who have since derived some benefit from the school he founded,—have reared in his name.

How great the esteem in which he was held by the people who knew him and how vivid their love for him was, was shown when at the age of ninety-two, his life's work well completed, he died; people from all walks of life, men who had first ridiculed him, but later had grown to understand and love him, coachmen, draymen and omnibus drivers, who had often given the right of way to the simple one-horse chaise, the most venerated figure in New York was wont to ride through town in, together with tradesfolk of all kinds, stood bareheaded on either curb of Broadway as the funeral procession passed, all paying heartfelt respect to the memory of him who had gone. The spontaneous feeling that had caused the people to close their shops voluntarily along Broadway, and had cleared that thoroughfare of all traffic at the time appointed for the passing of the hearse and the few carriages containing his kin, has hardly been shown for any man since.

Time is a corrosive, which eats into defects in character, laying them bare and destroying that which is false, leaving standing only that which is good and noble. Time has only shown how much good to the cause of humanity, which at all times lay uppermost in his mind, PETER COOPER did. If PETER COOPER had a weakness, it was his faith in his fellow-man, and this faith often cost him dearly; but he was wont to say that he would rather be swindled many times, than have one worthy applicant leave his presence unbested. The last articulate words which he uttered were "Another hundred thousand," and his children knew without doubt that he wished that sum given to COOPER UNION's endowment fund.

The CABLE

All through his life, up to the very end, his thoughts were to help, to uplift, to give.

What more can be said of PERRY COOPER, than, that his was a life dedicated to the cause of humanity; truly, a philanthropist in the fullest sense of the word.





IN THE MUSEUM

The Cooper Union Museum For The Arts of Decoration

THE only museums in the days of Peter Cooper were those of Barnum and Woods and one or two other very small places, which all exhibited natural phenomena and curiosities, therefore Mr. Cooper when planning his great building for education and recreation, proved that he was really a hundred years in advance of his times by arranging for one whole floor to be used as a Museum for the exhibition of Mechanical devices and for a Comorama, for the pleasure, instruction and enjoyment of all who could not visit foreign lands.

The assembling of the necessary objects for this Museum was delayed as the funds were insufficient, and all the pecuniary resources he had were soon swallowed up by the crying demands for scientific and artistic education, so the preservation even of a small space for the Museum became impossible of attainment. Consequently the project was laid aside, but never definitely abandoned.

While the Cooper Union was trying to fulfill the colossal educational demands of the public, two little girls with pigtail tightly braided, whose old-fashioned plaid dresses had been cut out and made by their mother on the first Wheeler & Wilson sewing machine, were being taken regularly by their father, Abram S. Hewitt, to all places where objects of art were exhibited before their sale at auction.

New York then offered little in the way of artistic manifestations, though every year there was an appalling mechanical exhibition at the American Institute, at Third Avenue and 43d Street, where art was represented by a female figure modelled in butter by a woman sculptress; but there was no incentive or demand for anything better. The prosperous merchants then composing the purchasing public had few dreams beyond the charms of the barmented and over-decorated hardwood trunks and atrocities of the degenerate furniture and ceramic forms of the English Gothic revival and the Third Empire. There were, however, some few picture galleries in private houses, most of these filled with black old Italian saints and sinners, which arrived in sailing ships and were sold on the wharves as they were landed as genuine "old masters."

As a young man, Mr. Hewitt walked all over Europe, poverty making it possible for him to select this best and most entrancing of all forms of travel. His wonderful knowledge of the Classics enabled him to enjoy Greece by speaking ancient Greek, and Germany, the Tyrol, Austria and Italy, where, speaking Latin together, he and an Italian priest made a long walking tour with this as their only means of communication. In this way he was enabled to gratify his burning desire to cultivate himself in all the arts, to study and familiarize himself with the systems of the greatest universities and scientific bodies, so wisely planned in Europe. Such journeys served to crystallize his wish to give the youth of America the best and most legitimate opportunities to study and to achieve.

With his marriage to the daughter of Peter Cooper came the great opportunity of his life, and he threw himself heart and soul, with singleness of purpose and true devotion, into the work of another man, to raise the standard of the Cooper Union so high that it should always maintain its leadership in educational matters, and stand in the forefront as the starting point and inspiration for thousands of scientific, mechanical, artistic and industrial careers.

As has already been said, one of the ways he devised for awakening and cultivating the minds of his children, was taking them to exhibitions. It was at great personal self-sacrifice and loss of much valuable time, for his occupations were many and his means slender.

To give his children pleasure and occupation, he placed within their reach in his personal library, delightful histories and historic fiction to fill their minds with the manners and customs of older times and countries.

These books then formed, and would form now, a valuable background for all later study of art and ornamentation.

The vagaries of Fate are curious. These young people who were among the pioneers at quartermen in riding, driving, hunting and skating, who loved horses and dogs, games, etc., and had imported the first game of lawn tennis from England, were still under

sixteen, when with pocket money they might have spent for such amusements, they solemnly purchased at auction, purely for their own pleasure, half of the Jervis Collection of Textiles, ranging in date from the 12th to the 18th century, having an intuition that, as they could not afford all, the earlier portion would possess greater technical and artistic value than the 17th and 18th century part. Museums were far from their thoughts since they had never seen one, but yet, this purchase was the initial step, since it now forms a valuable addition to the superb collection presented by Mr. J. Pierpont Morgan to the Cooper Union Museum.

Love of beautiful and exquisite workmanship was an inheritance from two practical and artistic grandfathers, who were master workmen and master mechanics and craftsmen. It produced also a natural interest in the arts of decoration, which necessarily remained rather restricted until the grandchildren went to Europe. Before that it was only by putting two and two together, and talking with the few art dealers into whose shops they went, that even the rudiments of the knowledge they sought, could be acquired.

The *laissez-faire* trade was then in its infancy in New York, with only Marty (later Sypher) and a few others. The auction rooms were Leavitt's, and later the American Art Association. Years afterward they were able to add to their education by talking with dealers in London and Paris, and with collectors, such as Messieurs Bonaffé, and Ruellet, Messrs. Morrison, Alma Tadema, Sir Frederick Leighton, and visiting the Westminster and Rothschild collections; the South Kensington, Louvre, Versailles and Gardé Meuble Museums, and, best of all, Fontainebleau, which is the complete epitome of the history and evolution of the decorative styles in France.

The opening of the Musée des Arts Décoratifs in the Palais de l'Industrie, with its succulent library in the historic Place des Vosges, was a perennial source of joy, and brought about an acquaintance and talks with the founders, Messieurs Alfred de Chateaubriant, Maciet, Berger and others. The girls' interest was intense in hearing first hand accounts of the difficulties in the way of making this Paris Museum of service to the public, for European artist artisans jealously kept tradition and inspiration alive from father to son, and did not feel the need of it; moreover, there were models on every side, even in the streets, also learned dilettanti and purchasers, severe in their demands kept up the standards. But such accounts only served to arouse the strong hereditary desire to place similar facilities within the reach of American artisans, and the difficulties appeared as easy to be brushed aside as cobwebs.

Now here is where the obstacles began and ended with irrevocable Fate.

A substantial, anonymous gift permitted the Cooper Union to free the space which it had previously been obliged to rent for income.

Quite ignorant of the immensity of the task they so calmly undertook, the girls, whose pigtails by that time were coiled around their heads, asked for room in which to install a Museum for the Arts of Decoration similar to the one in Paris, for the use of the Cooper Union Art Classes in connection with the courses of instruction. The trustees, recalling the fact that Peter Cooper had designed one floor in his original plan for a Museum, assented. Delightfully, if pathetically innocent and supremely hopeful, it seemed so easy of accomplishment, when willingness, the power of work and of spending their own pocket money, appeared to be all that was required.

With such absurdly limited means, they immediately began the opening of an easier road to knowledge than the one they had so laboriously travelled. Tradition and inherited hardship in acquiring education gave added eagerness to facilitate its free acquirement for others. America was entering a new era, and the Museum so inaugurated, and opened in May, 1893, was the pioneer blazing the trail.

The following, in the form of a parchment bound pamphlet, was issued just before the official opening, in order to establish clearly in the minds of its readers the scope of the Museum.

PLAN
of the proposed
COOPER UNION MUSEUM
for the
ARTS OF DECORATION

The aim of the Cooper Union Museum for the Arts of Decoration is to establish in New York City an institution similar to the Musée des Arts Décoratifs of Paris; a museum

which has done much to develop and maintain French supremacy in the finer forms of the industrial arts. A slight historical sketch of that admirable foundation will show what the New York museum hopes to accomplish.

In 1853, thirteen French designers and manufacturers, including in their number a furniture manufacturer, a goldsmith, a carpet maker, a wallpaper maker, Erard the builder of pianos, a lace maker and a caster of bronzes—met to form a "Society for applying the fine arts to industrial manufacture." Their reasons for this step were, that "since the London Exposition of 1851 an immense advance in the art of manufacture has taken place throughout Europe, and while France has not lagged behind, we cannot conceal from ourselves that our old supremacy has not been maintained. We recognize that new efforts must be made if we are not to be left behind in the general progress. English manufacturers especially, which before that date were very much behind from the point of view of art, have made prodigious strides, and if they continue to advance at the same rate will soon outdistance us."

They found that though there were schools of music and oratory, of sculpture and of painting, they looked in vain for a school which should extend similar advantages to the industrial laborers, and they resolved to found a society whose effort should be to give an equal stimulus to manufacturers. A society which should "devote itself to the culture of beauty as applied to the useful, to aid designers and workers in the fields of industry; to excite artistic emulation among the artisans; to encourage the general love of the beautiful and to develop the public taste." To this end they founded a museum of industrial art; a library to assist the artisans in his researches; special courses of lectures upon applied arts and occasional loan exhibitions.

This scheme was received at once with general favor and men eminent in all departments of national art and labor gave it their encouragement and aid. Barye was one of the early members, as was Klagsmann, Deck, Champfleury, Léon de Laborde, Carné-Belleuse and others of equal fame. Since 1853, twelve loan exhibits have been held, devoted to the study of ceramics, of work in metal and in wood, of tapestries and carpets, costumes, oriental art, furniture, the arts of women, fabrics, glass and stone. A museum was opened in 1877, filled with the contributions of the members and with gifts from generous collectors. Since then the museum has received Government aid (in the characteristic French fashion of a permission to hold a lottery from which a very large profit was realized), and to-day this splendid collection numbers more than 8,000 articles, of a value somewhat in excess of 1,800,000 francs (more than \$300,000), and occupies 3,000 square metres of space. Equally important is the library in the Place de Vauges (purposely placed in the center of the artisans' quarter of Paris), which contains 7,000 volumes, 250,000 engravings and photographs, 100,000 original designs by celebrated well-known designers and 280,000 samples of stuffs and fabrics, many of them antique. Since its opening 110,000 workmen have made use of this library.

One of the most important departments of the museum is that devoted to making casts of all such beautiful and historic objects as are unsuitable in the original, and anything from an entire room to a decorative nailhead, or a beautiful key can be reproduced in plaster and displayed in the halls of the museum. There is also a photographic studio maintained for the purpose of securing pictures of architecture, stone work, furniture, textiles, etc., or, indeed, anything which will admit of no other means of reproduction.

The system of classification of these enormous collections is simple and admirable. All the products of industrial art are grouped under two heads.

1. The Decoration of Edifices—exterior and interior.
2. The Decoration of Man, and the objects of his use.

Under the head of Exterior Decoration come three groups.

1. Architecture.
2. Sculpture Applied to Architecture.
3. Painting Applied to Architecture.

This last including mosaic and ceramic decoration, and all decoration in color.

The department of interior decoration is divided into two groups, each with four sub-divisions.

1. Stationary Decoration.
 - a. Woodwork.
 - b. Painting.
 - c. Hangings.
 - d. Metal Work.



Students' Room



Library



Proposed Hewitt Memorial Building



Newman & De Witt Street View.



Cooper Union
Fall & Winter 1913



Supply Store



2. Marable Decoration.
- a. Stoning.
- b. Pottery.
- c. Metal Work.
4. Various objects of art.

Under the second head—The Decoration of Man and the Objects of his Use—are four groups:

1. Costumes.
2. Arms.
3. Instruments.
4. Means of Instruction (books, engravings, photographs, etc.)

All these groups are arranged chronologically, and it is possible under this system to study the methods of manufacture and decoration from the earliest periods, through all the changes of taste and fashion down to the present day.

The prompt recognition and warm encouragement of this Museum of Decorative Arts showed how great was the need of it, and the constant use made of it by so large a number of designers and artisans has had its natural result in the stimulation and development of French manufactures. Its most important work, however, has been as an educator of public taste. Workers who have constantly before them the last results of the labor of many generations in their own trades must necessarily have their conception of beauty refined and enlarged, and be aroused to the possibilities lying in the material upon which they are engaged. Perhaps the most interesting thing to be seen in the Musée des Arts Décoratifs is the earnest attention and pleasure in the faces of the workmen who frequent it, and who are measuring, copying, or giving general study to the masterpieces of their own trades. Such is the Parisian Museum, and it is upon the same lines that the new Museum for the Arts of Decoration at the Cooper Union is endeavoring to carry out its work.

In some respects the rules and regulations will differ from those of its model—the endeavor being to make the museum of the utmost practical use, and to encourage the full use of its advantages by removing all tedious restrictions and formalities as far as it is possible.

There will be no numbers—the rooms being thrown open to the public for general use, and the only formality required to gain admission will be to stop at the General Office of the Cooper Union and ask for a card.

The only official will be a curator, and there will be no catalogues, as every object will be labelled distinctly, stating its nature, origin and history; the grouping and arrangement will be such, that the student will be put *en rapport* at once with the place of the object he is studying in the history of manufacture or art.

The exhibits will be supplemented by elaborate encyclopædic scrap books of pictures with collections made from every quarter, bearing directly upon the objects to be studied. Take for example the subject of mural decoration. In this department will be found many beautiful plaster casts showing the manner of different periods, and following the subject into the scrap-books it will be found to be supplemented by a collection of photographs, engravings, drawings and color sketches, all grouped historically and labelled with their nature and national origin clearly stated, so that all the knowledge to be obtained on the matter is within easy reach of the hand and eye.

These again are reinforced by books of reference from the Reference Library, which is to be one of the adjuncts of the museum. It will be entirely permissible here, as in the Paris Musée, to make measurements, copies, tracings, or sketches, for either private or business use, and every aid will be given by the curator, the picture scrap-books being specially arranged to facilitate borrowings.

The value and need of such an institution in New York City requires no explanation. Not alone the workman should benefit by the facilities it affords. The purchaser will find it as useful as will the manufacturer, if a carriage is to be built, a book bound, a door lock needed, a stair rail carved, a piece of plate designed, or a house decorated. An intending purchaser can familiarize himself with the best that has been done in any one of these departments, and can demand that his purchase shall not fall below their best standards of beauty, or his money secure less than its proper value in loveliness. The practical value of such an institution needs not to be pointed out, but it is as an educator of the public standard of taste that this museum hopes to do its best work.

The Cooper Union Museum for the Arts of Decoration owes its foundation to the efforts of the granddaughters of Peter Cooper in memory of the great and constant interest he always evinced in the education and welfare of artisans, but aid by contributions of money and art objects has been given by those who approved its purpose, and farther contributions in both kinds are hoped for from all those who recognize the place and purpose of beauty in our national life—not only for its refining and enlivening influence, but for its definite commercial value as well.

A committee will pass upon all objects contributed before acceptance, as it is essential that the artistic standard of the museum should be carefully maintained. Contributions to the picture scrap-books will also be gladly received—photographs of art objects, of architecture and decorations, cuttings from art journals, from magazines, or even catalogues are desired—whatever bears upon or illustrates the progress, or history of industrial art is of value, and will aid the American workman and manufacturer to elevate the character of their products.

Despite the great development of American art and manufactures in the last decade, so much still remains to be done to place us on a level with Europe, that the need of all such spurs to renewed effort requires no urging. The fine arts have not lacked for encouragement, and the result of that encouragement is to be read even by those who run; but art as applied to industry has been less appreciated and aided, with the result that for the best work in decoration we have still to depend upon foreign skill and taste. In almost all trades requiring artistic skill the best paid workmen are foreigners, whose sense of beauty has been trained by just such means as are offered by this new museum. Collections of beautiful specimens of art applied to industry, and the scarcity of artisans able to do this higher type of work, which requires an innate love of the beautiful to perfect, has made beautiful decoration unduly expensive. Admirable schools of design already exist, but after the hand has been trained the impulse of love and familiarity with beauty still is wanting, and such knowledge can only be acquired by the inspiration which comes from familiarity with masterpieces. It is impossible that any large number of artisans can be sent abroad for that training which painters, sculptors, and architects seek in the European treasure houses of Art, but photographs and plaster reproductions can bring to their own doors the forms of beauty whose influence they need. The general museums of art do much in this direction, but lack of labelling, the restraints of formal rules, and the general tendency to collect fine arts rather than examples of decoration, leaves a very definite want still unfilled—a want which the Cooper Union Museum for the Arts of Decoration hopes in some measure to supply.

ELIZABETH BISLAND.

The initial and magnificent gift, a complete series of decorative casts of the best French periods and styles by the greatest Masters of Ornament, which has since formed the nucleus and backbone, and given historical sequence to all the later collections, was personally selected by the Directors of the Musée des Arts Décoratifs and presented to start the Museum by Mr. and Mrs. Hewitt.

Then came a wonderful series of happenings. Manufacturers and dealers came forward with unsolicited help; Châtel and Tassinari of Paris, successors to the great 18th century firm which had worn the masterpieces of Philippe de la Salle for the bedchamber of Louis XVI and Marie Antoinette at Fontainebleau; Worth, Franch and many other well-known firms gave objects suitable to make small exhibits covering the various branches of the textile and ornamental trades, while the immediate family was laid under heavy contribution.

Each year, the superb and princely gift from Mr. Thomas Smell, of all the necessary painting of walls and woodwork, so worn and old from the constant use of classes, has kept the Museum always fresh and attractive, and every year he sends his receipted bill, together with generous gifts of money to expend.

Soon after it was opened, a prominent and public spirited citizen came to see what this new Museum was. No one had asked him, but his wife and Mrs. Hewitt had been at school together. In response to his request, the girls went to his office in his shop and were startled by his quick remark: "You have undertaken far more than you know, but I am going to help you." He was better than his word throughout the remainder of his life, both with gifts of wonderfully suitable objects, and generous gifts of money brought each year by Santa Claus. Contrary to his usual custom, he made no conditions as to its expenditure. His interest brought luck, for the rule of his life was never to have anything to do with the unlucky. These large sums, given so freely by Mr. George A. Hearn at a time when such objects were still procurable, purchased wonderful things and rapidly

placed the Museum in a position as to quality and standard that attracted the help of others. It soon contained sufficient of interest to bring also unpaid intellectual help. For the sake of the knowledge to be acquired in studying sufficiently to be able to write the labels and arrange the objects, such kind friends felt they were repaid a thousandfold for anything they did.

Had it not been for their initial poverty, perhaps the Directors would never have been in a position to recognize the priceless value of this amateur help. The intellectual aid offered by educated minds, not just to fill unoccupied hours, but from pure delight and interest in the subject, can never be equalled by the paid services of even the high-class assistant. New points of view have brought new arrangements. If the educated mind has met with difficulties, these difficulties have the more easily been swept from the path of the ignorant.

Some *Fairy Godmothers* must have been working overtime waving her wand, for both strangers and acquaintances continually sent gifts, also sums of money, both large and small, to spend, and Good Fortune, ever in the ascendant, has made circumstances as far apart as the poles contribute to the growth and useful power of this baby Museum.

Four thousand dollars, contributed as if by magic by the friends of the Museum, made possible the purchase of the Collection by Signor Piancastelli, Curator of the Borgese Gallery in Rome. This consisted of four thousand drawings of the 17th and 18th centuries, including the sketch books of several Italian Artists who, having travelled all over Italy, noted the great ornamental exterior and interior decorations as well as designs for the ornaments of every trade.

The outgrowth of a chance meeting of Mr. Hewitt and Mr. Pierpont Morgan at a men's dinner, was the purchase and presentation by Mr. Morgan of the Bodin Collection of Brussels, also the Vives Collection of Madrid and the Stanislas Baron Collection of Paris. This gift brought the Cooper Union Museum to the rank of the South Kensington Museum as to textiles, and even gave it six pieces that do not exist in the superb Berlin Museum. A cheque sent by Mrs. Trevor, an old New Yorker, paid for a collection of rare old French porcelain and talenques, that had been ordered when the treasury was empty. The purchase of the famous Dedouss Collection was made certain by the gift of \$10,000 by Miss Eleanor Blodgett in memory of her Mother.

Among other splendid reasons for the quick advancement of the Museum the thoughtful and generous gifts of Mr. Jacob H. Schiff and Mr. Thomas Seell have their place. Each time the ladies went to Europe these gentlemen sent large checks to buy the best that could be found in the way of fine things to enhance the beauty and working qualities of the Museum.

Owing to its restricted space, the Museum must make a general rule not to accept nor exhibit objects later than the first quarter of the 18th century, but it gladly accepts one class of objects most essentially modern. Mr. Cooper wished the walls of the corridors and staircases lined with things of interest for those going up and down. As quickly as they can be acquired, leaves from the note and sketch books of artists of the last half of the 18th century, and of the present day, are being placed there. Distinguished men, namely, Frederick R. Church, Winslow Homer, Robert Blum, many other Americans, also English and Frenchmen, are already represented. The first conception of numerous well-known pictures, perhaps jotted down merely on an envelope, box cover, or chance scrap of paper, are there to inspire and illuminate students and laymen.

By means of such sketches it becomes a privilege to see what these talented men saw all over the world with the argus eyes of artists, so sensitive to impressions of beauty, form, color, light and shade. The value is beyond words, and not one atom of the work of an artist should ever be destroyed since the study of the change of style, manner, technique and character of work and composition from youth to age, often adds valuable instruction, higher inspiration, and more lofty conception to the years of student work.

A great power in building up the Museum is the privilege of expending the income of the fund of five thousand dollars given to the Cooper Union by the late Mrs. Robert Stuart for the purchase of art books. Through it, the Reference Library is rich in standard books and richer still in rare books, and the remarkable series of ancient and modern illustrated books are priceless for study.

The fame of the Encyclopaedic Scrap Books began over twenty-five years ago, now numbering over one thousand volumes, has reached as far as Boston, and recently a Head of the Department of the Boston Public Library actually came on in person to see what the collection could be, of what use, and how arranged. He seemed overcome by its practical instructive value, and at the fact that both rare and expensive books had been taken apart and remade in a new order to render them more available for study. He was



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collected at the large number of illustrated children's books of every age and country, and at the fact of their being constantly consulted for costume, and for decorative and color schemes.

The Chart prepared by the learned Directors of the Musée des Arts Décoratifs, Paris, has been of infinite help in arranging these Scrap Books. But, "over there" people begin with more knowledge. Therefore the arrangement of the Chart has necessarily been revised and the books built up from the simplest alphabetical, chronological and geographical arrangement.

A Council organized to give financial assistance, has facilitated the purchase of hundreds of unique objects excelling in beauty of design and of exquisite workmanship; the commercial value has increased many hundredfold and being easy of access to work from, they have been a fruitful source of inspiration and in constant use by artist-artisans.

The Museum, as it now stands with its countless treasures, presents a wealth of art with a dominant practical side. It is essentially for the study of the beautiful as applied to industry.

Among the more important plaster groups are the Versailles Gardens and the Bowood Gardens. There is also the railing of the staircase of the Petit Trianon, Versailles, and Le Temple d'Amour from the Gardens of the Petit Trianon, the latter having been presented by Mrs. Herman Delich.

There are many fine paintings, among them a ceiling from the Decaux collection; decorative panels by J. Gatti; decorative panels in oil in the Chinese style by Jean Pillement, painter to the King of Holland and Marie Antoinette; four modern copies by de la Bréville of the famous panels of the Louis XV period by J. Honoré Fragonard. The originals were for years at Grasse, France, but are now owned by the H. C. Frick estate. A seventeenth century Dutch panel which has been copied many times is by Jan Van Huysum, noted for his superior taste in group arrangement, and is of flowers and fruit with a bronze vase.

Priceless textiles, some dating from the second century, fill some of the large glass exhibit cases. Many pieces—one might almost say fragments—of exquisite tapestry are numbered in the collection, there being examples of Coptic, Egyptian and Byzantine art. Among the exhibits is a very rare piece of bronze colored tapestry about 1,000 years old which belonged to the former Bada collection of Mr. Morgan. One of the lovely pieces of fine work is Byzantine Laine et Lin VIII Siècle (wool and linen, VIII century). There are broadsides and laces, some of the seventeenth century Venetian point being particularly beautiful, and showing a great variety of patterns and stitches.

The present-day enthusiasts for old wall papers should find a splendid stimulus in a collection of old handboxes which fill the upper shelves of one entire room. These are chiefly in shades of blue, and one finds depicted upon them "Castle Garden" and "Gandy Hook" as they looked to an imaginative artist once-upon-a-time.

The student in the art of interior decoration will find great inspiration in the old pieces of furniture—chairs of different periods and centuries—chiefly from France, England and Italy. A Louis XIII side-chair with green brocade silk and gilt trimming is one of this interesting collection. Its back is made of woven gilt bands which have become tarnished with age. Several of the period chairs have only the wooden frame remaining, and in some cases even this is worm-eaten, but it does not spoil the effect of the graceful lines and exquisite carvings. A bedroom set of six pieces, formerly owned by Clyde Fitch, is of brocade blue and silver. The set is painted in artistic design and has been copied many times.

There are queer chests of wood with beautiful carvings, carved and gilded pedestals and wooden panels. The series of seven English panels of the seventeenth century carved in the style of Grinling Gibbons is particularly fine. Then there is a handsome Louis XVI carved wood panel from the former apartment of Marie Antoinette in the Chateau at Versailles, where similar ones still remain. The carvings are by the brothers Jules Simeon and Jules Hugues Rousseau. From the Chateau d'Amboise, originally a hunting box occupied by Marie d'Angoulême, come the eighteenth century French Regency period door panels. Other interesting pieces of furniture include a large Dutch cabinet of the eighteenth century, inlaid with flower and foliage designs in colored woods; an Italian falconerie mantelpiece, with raised ornaments after Della Robbia, and a Queen Anne period mirror (now cracked), with frame, stand and table of green and gold lacquer.

Among the religious objects is a wonderfully carved altar with carved ivory panels, and a pedestal of carved wood inlaid with mother-of-pearl.

An odd little box, carved and gilded and not unlike a jewel casket, has three sides of glass and a red brocade cushion. It is a seventeenth century vitrine, and was used to show off the handiwork to admiring friends.

There is a collection of bronzes and fire gilt mounts for furniture, the gift of the late Jacob H. Schiff. This collection represents pieces from the eighteenth century in that interesting period of French history, the Directory and the First Empire.

Keys of the thirteenth, fourteenth and fifteenth centuries are shown, and even door-knobs. From an old house in Portman Square, London, England, come some old Chelsea door-knobs of hard paste of the Duesbury period. Then there are eighteenth century English Battersea enamel-drawer pulls and knobs. Dishes of china, porcelain and pewter; 118 pieces of antique Persian glass, the gift of Rudwan Wanshaker; shabberies, vases and jars; and Egyptian, and oriental vases and bottles also are included in the collection.

One of the interesting exhibits to a connoisseur of sorts, is a series of beautifully flowered enamelled metal disks which have tiny chains just large enough to enable them to be slipped over the head of a bottle. Besides the decoration there are inscribed on these such historic names as Midos, Chartreuse, Cagnac, Santerne, Rhos, Kirsch, Chablis.

Bird cages of every size and shape are represented in great numbers. These are mainly of wood. One type is the Dutch cage of wood and wire so often seen in Dutch paintings.

An interesting group is of seven black Wedgwood medallions—the heads of emperors—and ten black Wedgwood medallions, the heads of philosophers. There are also small boxes of enamel and silver and, from Japan, a set of carved ivory grotesque masks.

Miss Elsie de Wolfe has contributed a collection of sixteenth century shoes and slippers—French, Finnish, Spanish, Oriental and South American.

Costumes, musical instruments, candlesticks, fringes, jewelry and fans are also exhibited. One of the latter is eighteenth century and of paper with carved ivory sticks. It is printed with the facts and texts relating to the Church of England. There are numerous books—"Thomas à Kempis" in Latin, with red velvet binding and silver mounts, date 1720; a seventeenth century prayer book, with silver cover and clasps; an "Almanach for 1188" (Dutch), with silk binding and gold, and mounted with two miniatures.

Lovers of historic and patriotic treasures will be interested in a piece of a gown worn by Martha Washington at the White House. It is a striped silk material with a plain dull red stripe alternating with a pale blue one, which is flower-sprigged. The stripes are three-quarters of an inch wide.

The memorabilia of Peter Cooper form one of the most interesting exhibits from a human standpoint. One is his pocket book, showing how he always kept twenty-five cent pieces (they were then of paper) so that they could be taken out easily and given away to poor people. There are his watches; a section of the first Atlantic cable, and a section of the second; books, marked by him as he read them; his inkstand and front door keys, and his last signature written at his glass factory.

From this description of the making of this Museum, it is evident that it could not avoid being run on lines widely different from those controlling other Museums; and is an amply sufficient reason for the modesty of its use. Restrictions are eliminated, except the few necessary to protect the objects; the salient point is, that the objects are there for use, to be worked from, and, if so desired, to be removed from their positions and placed in any light. They can be photographed or measured (a tape line not a ruler must be used), and no squeezes or impressions taken. Naturally constant use will have a tendency to damage, even destroy certain objects (many of course are indestructible), but irreparable damage could not be accomplished under a hundred years, and if in that time an artistic tradition passed on from father to son, as in Europe has been created, the existence or non-existence of these objects will not seriously matter, and during all that time the museum will have been fulfilling its destiny.

As Peter Cooper, the philanthropist, placed upon the seal of the Cooper Union with the professional pride of a Master Workman, this simple and touching device, "Founded by a Mechanic of New York," so his granddaughters hope the seal of the Museum may some day bear the inscription, "Founded by Hereditary Workers in the Same Tradition."

The
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COOPER UNION was founded in 1859 by Peter Cooper for the advancement of science and art. During its existence of over half a century, the institution has given free education to over 180,000 men and women regardless of race or creed, without money and without price. The plan of the institution centered first of all in free evening classes that would tend to improve and elevate the working classes of the City of New York. These classes have constituted the main educational work of Cooper Union for sixty-two years.

The course in General Science, organized from the beginning on the basis of co-ordinated instruction in science, mathematics and drawing, is now developed into five-year courses in Civil and Mechanical Engineering, representing approximately a student attendance of 200 each year. The course in Chemistry, also organized in the early days of the institution, has become a six-year course, dealing with advanced technical work, in the later years. In 1900 the course in Electrical Engineering was organized and is now a vigorous and intensive five-year course.

In all these courses, laboratory instruction has for many years been an important feature and the equipment of both the scientific and the technical laboratories used by the night school students rival the equipment of all but a few of the great engineering schools of the country.

The Night Art School has also constituted an important element in the work of Cooper Union and besides fundamental courses in drawing and modeling, includes today a dozen courses in practical fields of applied design.

The Woman's Art School has been a feature of Cooper Union since its foundation. With ample facilities of rooms and equipment and a corps of 14 workers on its instructing staff, it affords each year training in the applied arts to a large body of students.

Included in both the charter of the institution and in the deed of trust is prominent mention of a Day School of Technology. And in the Trustees' Report of 1868 there appears the following statement:

"But the main object for endowment, which the Trustees desire to keep before the public, and especially make known to those who have so prospered in life, as to be desirous to do something for the benefit of their fellow men, and to link their names and memory with a good work, is the establishment of the Day School of Technology, which by the terms of the Charter, the Trustees are bound to establish whenever the means at their disposal are adequate to the end in view."

The financial resources of the institution, however, were not equal to the establishment of this school until 1900. At that time, additional space was set apart for class rooms and laboratories, and a faculty, headed by Professors Geo. W. Plympton, Wm. A. Anthony, and Robert Spivey, organized the course of instruction. The school has been in continuous operation since that time, expanding in numbers and in quality of work, with the advantages of the exceptional equipment and organization, developed cooperatively, for the benefit of the Day School and the Night Schools of Science.

On December 29, 1921, the Institute of Technology was formally registered by the Board of Regents of the University of the State of New York as an approved institution of college grade in its courses leading to the degrees of Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, and Bachelor of Science in Electrical Engineering and Bachelor of Science in Chemical Engineering, as concerned with students who have had four years of preparatory work in secondary schools listed by the Regents.

In 1912, three stories of the Abram S. Hewitt Memorial building were completed and equipped for use of the Schools of Science. The erection of this building allowed the construction of a number of specially planned science and technical laboratories, which were liberally furnished with machinery and apparatus representing the best modern technical and school practice.

These laboratories include the following: Physics, Materials Testing, Thermodynamics, Direct Current and Alternating Current Dynamos, Electrical Measurements and Motor Vehicle Testing.

The Chemical Laboratories occupy the fifth floor of the original Cooper building.



*Behold the learned men of wit,
The Faculty of our school,
For, thus an ancient scrolls his writ;
"The wise shall teach the fool."*

FRANCIS M. HARTMANN

Professor of Electrical and Mechanical Engineering, Dean of the Schools of Science, Licensed Professional Electrical and Mechanical Engineer

B.S. (Scientific Course), Cooper Union, 1895; graduate (Chemistry) Cooper Union, 1898; post-graduate work in physics under PROFESSOR ARTHUR, 1898-1899; E.E., Cooper Union, 1903; work in mathematics, New York University, 1902-1903; fellow American Institute of Electrical Engineers; member American Society of Mechanical Engineers, American Association for the Advancement of Science, American Physical Society, Society for the Promotion of Engineering Education; Engineering Department, Public Improvements, N. Y. C., 1894-1901; consulting work on Power, 1904, and on Transformer Iron, 1907. Author: Elementary Mechanics for Engineering Students, Heat & Thermodynamics, Contributions to Electrical Review, Biographical Sketch of George W. Plympton. Notes—Alternating Currents and Electrical Transmissions.

PROFESSOR HARTMANN was appointed instructor of Physics at the Cooper Union Night School in 1899.

Appointed Instructor of Physics and Electrical Engineering in Day and Night Schools in 1901.

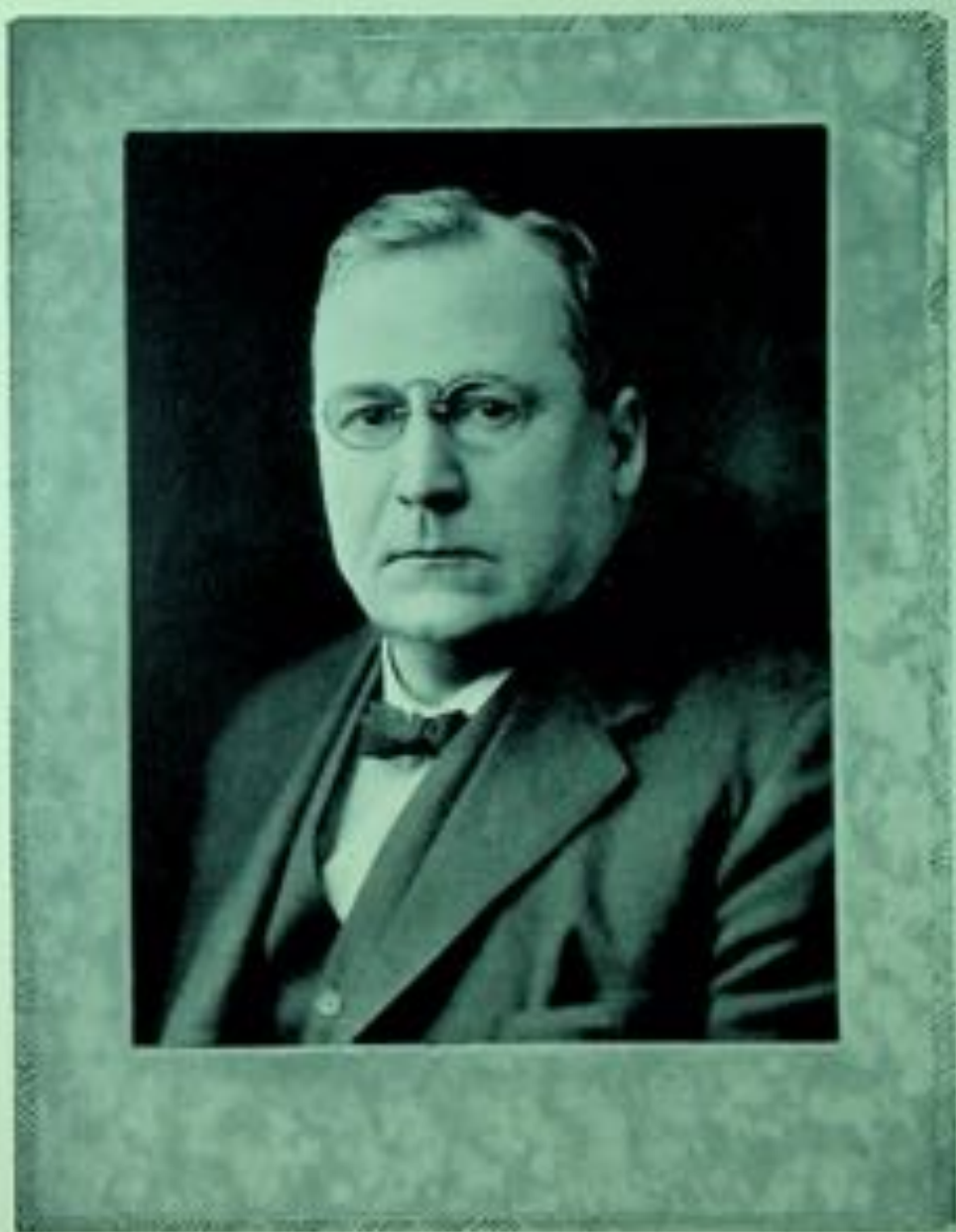
Appointed Assistant Professor of Physics and Electrical Engineering in 1903.

Appointed Professor of Physics and Applied Electricity in 1907.

In charge of the Department and Professor of Electrical and Mechanical Engineering of the Schools of Science since 1908.

Took charge of the Night Course in Electrical Engineering in 1900, when it was a one-year course, and developed it into the present five-year course in Electrical Engineering as a distinctive night school course in Electrical Engineering; giving a coordinated course of instructions, in this branch of engineering, not obtainable elsewhere in any night school.

Took a very active part, co-operating with PROFESSORS ARTHUR and SPECK, in organizing and developing the Day Technical Courses into coordinated four-year courses in engineering; having, from the time of the inception of the Day School, worked incessantly, in conformity with the words of PETER COOPER for "the establishment and maintenance of a thorough polytechnic school . . . which school shall, as far as possible, and as soon as possible, be made equal to the best technology schools now established, or hereafter to be established."





Professor G.E. Baigman



Professor C. Rossmassler



Professor F.M. Hartmann



Professor T.E. Foss



Norman L. Towle



Professor R.C. Brunfield

DEPARTMENT OF ELECTRICAL ENGINEERING

Professor

F. M. HARTMAN, B.S., E.E.

Assistant to the Professor

NORMAN L. TOWLE, B.S., E.E.

Tau Beta Pi; Sigma Xi; Sigma Alpha Epsilon; B.S. in Electrical Engineering, 1917, E.E. 1920, Worcester Polytechnic Institute; Graduate study and research, Westinghouse Electric and Mfg. Co., 1917-1918; Engineer, Westinghouse Electric and Mfg. Co., 1918-1919; Iowa State College, 1919-1920; in charge of Electrical Laboratories, Cooper Union; member American Institute Electrical Engineers.

Instructors

ALFRED HILBERT, B.S.

W. A. MILLER, B.S.

ALBERT GORTZ, B.S., C.E.

HENRY SCHERER, B.S., E.E.

CHARLES A. STANNICK, B.S.

A. F. HAMM, E.E., A.M.

H. C. KOENIG, B.S., E.E.

DEPARTMENT OF MECHANICAL ENGINEERING

Professor

F. M. HARTMAN, B.S., E.E.

Assistant Professor

GEORGE F. BATEMAN, B.E., M.E.

B.E., Cooper Union Day School of Technical Science, 1907; machinists' helper in steam power plant, 1900-1903; electrical testing and power plant work, summers of 1904, 1905, 1906; electrical and mechanical testing, 1910-1916; industrial and power investigations, summers of 1915-1916; instructor, U. S. Navy Gas Engine School, N. Y. C., summer of 1917; enrolled lieutenant (j.g.) in U. S. Naval Reserve Force, May, 1918, and later promoted to lieutenant; contributed to the organization of the U. S. Navy Steam Engineering School, Hoboken, N. J.; served as head of the Propulsion Machinery Department and later as head of the Advanced Department, organizing and taking charge of research, information and editorial staffs; member, American Society of Mechanical Engineers; fellow American Association for the Advancement of Science; has always been actively connected with alumni affairs, being a charter member of the original Day Alumni Association and its first secretary from 1907 to 1914; was secretary of the Organizing Committee of the C. U. Alumni Association and the first secretary of the newly organized association, '08-'10; was a member of the Organizing Committee of the C. U. Alumni Federation, '17, and, ipso facto, is a member of the present Federation.

Instructors

LEON ORYER, M.E.

H. W. MERRITT, B.S.

DEPARTMENT OF CIVIL ENGINEERING

Professor

FRED E. FOSS, A.M., Sc.D.

Phi Beta Kappa; A.B., Bates College, 1885; A.M., Bates College, 1886; B.S., Massachusetts Institute of Technology, 1889; Sc.D., Bates College, 1908; member American Society of Civil Engineers, American Railway Engineering Association, American Society for Testing Materials, Society for the Promotion of Engineering Education.

Assistant Professor

RAY C. BRUMFIELD, B.S.

Tau Beta Pi; B.S., Purdue University, 1912; member American Society for Testing Materials, Engineering Division of National Research Council, Committee on Hardness Testing.

Instructors

GILBERT MORRISON, B.S., C.E. J. P. J. WILLIAMS, B.S., M.S., C.E.
HENRY R. COWDREY, B.S., C.E. WILLIAM E. BROWN, B.S.
GEORGE M. KLEINKNECHT, B.S., C.E.

DEPARTMENT OF MACHINE DESIGN AND MECHANICAL DRAWING

Assistant Professor

CARL ROSSMASSLER, B.S.

B.S., Massachusetts Institute of Technology, 1901; member American Society of Mechanical Engineers, Society of Automotive Engineers, Engineers Club of Philadelphia.

Instructors

JOHN W. LANGFUT, B.S. W. C. BRADGATE
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J. CIRRONA



Professor H. C. ENDERS



Professor H. G. BYERS



Professor M. TOCH

DEPARTMENT OF CHEMISTRY

Professor

H. G. BYERS, A.M., Ph.D.

Phi Lambda Upsilon; Alpha Chi Sigma; Sigma Xi; A.B., B.S., Westminster College, 1895; A.M., Westminster College, 1898; Ph.D., Johns Hopkins University, 1899; fellow American Association for the Advancement of Science, American Institute of Chemistry; member American Chemical Society; Captain Chemical Warfare Service; Lieut.-Col. U. S. R. Chemical Warfare Service.

Assistant Professor

HENRY C. ENDERS, B.C., A.M., Ch.E.

B.C., Cooper Union, 1906; A.M., Columbia University, 1920; Ch.E., Cooper Union, 1922; Past President of Cooper Union Chemical Society; Past President of Cooper Union Alumni Association; member American Chemical Society, Chemists Club; fellow American Association for the Advancement of Science, American Geographical Society.

Adjunct Professor

MAXIMILIAN TOCH, B.S., Chem.E.

B.S., New York University, 1884; I.L.B., New York University, 1886; Ch.E., Cooper Union, 1920; Past President of the Chemists Club; Past Chairman of the Society of Chemical Industry (New York); member Institute of Chemical Engineers; delegate of the Seventh International Congress at London, 1918; Vice-President Paint and Varnish Society of London.

Instructors

WILLIAM N. FRITCHARD, JR., B.S.
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E. O. MOEHLMANN, B.S., M.S.
W. RICHARDSON, B.S.

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FRANCIS P. CAREY, B.S.



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DEPARTMENT OF MATHEMATICS

Professor
H. W. REDDICK, A.B., A.M., Ph.D.

Phi Kappa Psi; Sigma Xi; A.B., Indiana University, 1904; A.M., University of Illinois, 1906; Ph.D., Columbia University, 1910; member American Mathematical Society, Mathematical Association of America.

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 L. M. KERRICH

FACULTY OF THE NIGHT SCHOOL OF ART

FREDERICK DIELMAN, N.A.

Art Director and Chairman

Phi Beta Kappa; graduate of Calvert College, Maryland; studied in Royal Academy and Polytechnic Institute, Munich; served for six years in U. S. Engineer's office; head of Department of Art, College of the City of New York, '02-'17; president National Academy of Design, '17-'20; National Academician, '20; member Art Commission of New York City, '05-'04; Hon. Fellow for Life, Metropolitan Museum of Art; Hon. Member Institute of Architects, '00; member National Institute of Arts and Letters.

EDWARD A. MILLER, B.S., C.E.

B.S., Cooper Union, 1874; C.E., Cooper Union, 1911; Chief Engineer of Park Department, New York City, 1898-1920; member American Institute of Park Executives, Municipal Engineers of the City of New York, General Science Alumni, Alumni Federation, Phiades, Verdi Club.

M. W. ALLEY

Alpha Tau Omega; Carnegie Institute of Technology 1911; appointed Instructor in Architectural Drawing Cooper Union, 1921.

GEORGE T. BREWSTER

Born, Kingston, Mass., Feb. 24th, 1862; Elementary Education, Public Schools, Staughton Mass.; Preliminary Art training, Mass. State Normal Art School. Student, Ecole des Beaux Arts. Work as sculptor dates from 1884. Founder, modeling class Art Students League, 1886. Instructor, Art Department, Cooper Union, since 1900. Sculptures include: Statue of "Indiana," Indianapolis; Statue of "Hope," State House, Providence; "Defense of the Flag" in Bronze, Athens, Pa.; University Club Seal, entrance University Club, N. Y. C.; Fountain of Nature, Pan-American Exposition; Eleven portraits of the Old Masters; Art Museum Exterior, St. Louis; Portrait, Relief, Prof. Anthony, Cooper Union, N. Y.; etc.

HENRY A. GOLDSMITH

Graduated from Ohio Institute and Cincinnati Art Academy and Cooper Union, N. Y.; Studied in Europe and for 25 years Designer of Interior Decorations with leading N. Y. Firms.

ETHEL TRAPHAGEN

Student, National Academy of Design, Art Students League, Chase School and Cooper Union; with Francis Jones, Kenneth Hayes Miller, Bryson Burroughs, Wallace, Morgan, B. S. Cleveland, Robert Henri and Arthur Dow. Director Traphagen Co-operative School of Fashion; Lecturer, N. Y. Evening School of Industrial Art, N. Y. University, and Cooper Union. Staff, Ladies Home Journal and Dress Magazine.

WILLIAM de LEFTWICH DODGE

Studied in Paris and Berlin, 1892-1900. Entered in examination of Ecole des Beaux Arts, No. 1, 1894; two third-class medals, 1894-1895; Prix d'Atelier, 1896, in Genoux Atelier; two mentions in Cours Yvon, 1895; third class medal in Salon, 1899; Medal, World's Fair, Chicago, 1893; Gold Medal, Society of American Artists, 1898, N. Y.; Mural paintings: Dome Administration Building, World's Fair, Chicago; N.W. Corner Pavilion, Library of Congress; Empire Theatre, N. Y.; Tower of Jewels, Panama-Pacific Exposition, San Francisco; Library, Cedar Falls, Iowa; Flag Room, State Capitol, N. Y.

FREDERIC EHRLICH

Student, Cooper Union; Studied under C. S. Reinhardt, Walter Appleton Clark; Art Students League, National Academy of Design, Teachers' College. First award, graduation competition in pencil sketching; Silver Medal in the Dr. Hoffman competition; Advisory Council, Rose School of Art and Design.

WILLIAM STARKWEATHER

Pupil of the Art Students League, N. Y.; Academie Colonna, Paris; Sorolla, Madrid; followed by three years independent study in Italy. Member of the American Water Color Society, the N. Y. Water Color Club, corresponding member of the Hispanic Society of America. Author of "Goya Paintings and Drawings," published by the Hispanic Society.

VICTOR PERARD

Pupil of Genoux and LeBlanc; studied at Beaux-Arts, Paris; Academy of Design, Art Students League, N. Y.; Illustrator, Painter, Etcher. Member of Illustrators Society and Salmagundi Club.



EDWARD A. MILLER



FREDERICK D. DORMAN
Art Director



WILLIAM H. SMITH



VICTOR PERARD



FREDERIC EHRLICH



GEORGE E. DIMSTER



ETHEL H. TARRAGES



W. E. STARKWEATHER



HENRY A. GOLDSTEIN



PAUL AGLEY

Faculty
of the
NIGHT
SCHOOL
of ART

THE NIGHT SCHOOL OF ART

ADVISORY COUNCIL

MISS SARAH COOPER HEWITT
MISS ELEANOR G. HEWITT
HERBERT ADAMS

EDWIN H. BLANCHFIELD, N.A.
WILLIAM A. BOWING
FRANCIS C. JONES

INSTRUCTORS

ARCHITECTURAL DRAWING

Supervisor

EDWARD A. MILLER

ABRIAN L. BENNETT
W. L. SMITH
J. C. MCGOWAN
VERUCCI PETRONI

M. W. ALLEY
GEORGE H. LEY
W. F. RICHARDS
SAMUEL ESTHLEY

Librarian

FLORENCE L. PHILLIPS

FREEHAND DRAWING

VICTOR PERARD
H. D. RANDALL

W. B. STARKWEATHER
JULIUS JOSEPH

WILLIAM B. VAN INGEN

DECORATIVE ARTS

Decorative Design

FREDERIC EHRLICH

G. HERBERT KROLL

Printing Arts

G. HERBERT KROLL

Advertising and Poster Design

WM. J. HANNEMAN

Commercial Design

FREDERIC EHRLICH

Decorative and Pictorial Composition

WILLIAM DE L. DODGE

Furniture Design

HENRY A. GOLDSMITH

Costume Design

ETHEL H. TRAPHAGEN

CONSTANCE REED

MODELING

GEO. T. BREWSTER

H. CEDERSTROM

THE Night School of Art is composed of four departments, Free Hand Drawing, Decorative Arts, Modeling and Architectural Drawing, and is represented by twenty-four classes. The course in each of these departments is designed to give the student, who is employed during the day time, the opportunity to develop any talent, that he or she may possess; to teach them the fundamental requirements and principles so essential to a sound basis for future development and progress. The work in the different departments is especially helpful to the ambitious student, who can give five evenings a week to study and by constant practice and application reach the goal he has set out to attain.

It was Peter Cooper's earnest desire to establish an institution, in the hope that "unnumbered youth will here receive the inspiration of Truth." In a letter written in 1864 to the Board of Trustees of "The Cooper Union for the Advancement of Science and Art," he writes, "I desire to make this institution contribute in every way to aid the efforts of youth to acquire useful knowledge, and to find and fill that place in the community where their capacity and talents can be usefully employed with the greatest possible advantage to themselves, and the community in which they live."

Judging by the greatly increased number of students who are seeking admission to the Institute, and the thousands who are now attending the different classes, is a fair indication that the great student body is receiving just such help and knowledge, and that Peter Cooper's ideas and wishes are being developed to the utmost. In 1864 the Night Art Classes consisted of one Architecture, two Mechanical and four Free Hand Drawing classes, with an enrollment of 325 students. The sessions were from 7:00 to 9 P. M., and in 1866 were from 7:45 to 9:15 P. M., while in 1923 the applicants for admission to the Art classes numbered 2,261, of which 1,293 were admitted, and this number does not include the hundreds who were promoted to higher classes, and still attend the school. In 1864 there were seven classes, while today we are proud to say the number has been increased to twenty-four, and in such subjects that will better equip the student to master the problems that confront him in the Professional, Commercial and Industrial fields. The Night Art Classes have developed into the teaching of the following subjects:

FREEHAND DRAWING LIFE CLASS DECORATIVE DESIGN
PRINTING ARTS ADVERTISING AND POSTER DESIGN
COMMERCIAL ADVERTISING PICTORIAL COMPOSITION
FURNITURE DESIGN COSTUME DRAWING MODELING
ARCHITECTURAL DRAWING; the latter comprising ten classes.

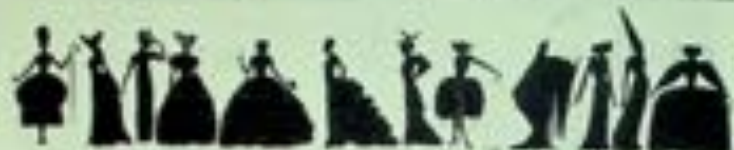
Mr. Dickman, Art Director of both the Woman's Art School and of the Night Art Classes, has not only developed this highly efficient course of study, but through his consideration, friendly attitude and cooperation with all of the instructors under his guidance and care, their work at the school has not been looked upon as a task, but rather as carrying out of the idea of Peter Cooper "to aid the efforts of youth to acquire useful knowledge and fill that place in the community where their talents can be usefully employed."

Mr. Dickman has been with this Institution since 1903, and in the Forty-sixth Annual Report of the Trustees we read: "The Trustees are very glad to announce that they were able to secure the very valuable services of Mr. Frederick Dickman, President of the National Academy of Design. Mr. Dickman was not able to accept a permanent position as Art Director, but it is the hope of the Trustees that they may have the benefit of his services down to the commencement of another Academic year. He has promised that in any case the Institution shall have the benefit of his advice and suggestions with reference to the future efficiency of the Art Department."

We are all very happy to have Mr. Dickman still with us, and only too anxious to carry out his ideas and suggestions, which have always proved to be the most logical and for the benefit of the school at large.

Aside from the knowledge which the school is imparting to the thousands of students still attending, or those who have graduated, is the very interesting fact of the remunerative positions hundreds of students fill during their course of study. With their natural talent, supplemented with instruction and training received here, they either advance themselves in their old positions, establish themselves, or command a salary that would have seemed exorbitant to the student of 1864.

And Peter Cooper's Spirit and Work is ever MARCHING ON!



NIGHT SCHOOL OF ART

Examples of the students' work in the Architectural, Composition,
Fashion and Modeling Classes



NIGHT SCHOOL OF ART

Drawings finished in the Life, Freehand and Antique Classes

Forty-seven



THE SCHOOL OF ART

Work Designed by students in the Design, Poster and Commercial Advertising Classes

The SENIORS



Senior Dance



HOTEL PLAZA

Mirror Room

JANUARY 10, 1924

COMMITTEE

Chairman

WILLIAM J. MAHON

Publicity

CHARLES F. SCHMID

Decorations

H. FLAHERTY

Finance

FRANK P. GILL

Arrangements

E. J. PETERSON



MARTIN L. OSHER,
President
Electrical Engineering '24



FREDERIC HEYDT
President
Inst. of Technology '24



PETER LONGO
President
Architecture '24



A. DE CARO
President
General Science '24



GEO. N. VACCA
President
Chemistry '24

Chemistry, 1924

Officers

G. N. VANCE.....	President
A. F. SALTENREICH.....	Vice-President
W. HOMER.....	Treasurer
F. ANTON.....	Secretary

Delegates to C. U. S. L.

L. SOLOMONOFF

A. KNOX

Way back in 1918 A.D., that mysterious power known as Fate brought together at Cooper a group of smiling, eager, embryo chemists, many of whom are now proud seniors and as happy as ever.

Like grape-nuts—or is it postum?—there is a reason.

Reason for the pride can be found in the fact that the class has done considerable to help make Cooper a college of the type you read about.

When not engaged in trying to make a bigger Cooper by pushing the walls out by chemical means, a record percentage of the members of this class has found outlets for their energies in every activity at Cooper. Chem. '24 has supplied an orchestra organizer and director; managers for the varsity baseball, basketball and football teams; *Campus* editors; players on varsity baseball, basketball and track teams. It has also supplied *Campus* and *Pioneer* staff workers, and its members have served in all offices of the Students League.

There is also reason for happiness aside from prospects of diplomas, for the members of this class always managed to have their diversions. The spirit which made the six years go merrily by has pervaded all class doings. Among these should be mentioned the class theatre parties and suppers with their attendant pastimes, and also those never-to-be-forgotten howling parties.

Now we have come to the end, but there is no need of slow music, for the end is only a beginning—and with such a pleasant past, nothing but a bright future will harmonize.

THE HISTORIAN.

Institute of Technology, 1924

Officers

FREDERICK G. HEYDT.....	President
ARTHUR WATKINSON.....	Vice-President
RALPH A. DANE.....	Treasurer
RICHARD C. MYLER.....	Secretary

The last remnants of the Class of 1924, of the Institute of Technology, must finally bid the School—farewell! Who shall dare to say—"With a light heart"—and yet—who shall say—"With a heavy heart"? It is with regret that we eighteen survivors of the original one hundred and five men who entered the portals of the Institute, for the first time, in the fall of 1920, now look for the last time as students, upon the familiar walls of our Alma Mater. Ah—yes—we eighteen men have passed through four long, eventful years. How our memory passes to each year in rapid succession.

In the first year many of us were too timid to take an active part in the school activities. A few, who were not afflicted with timidity, showed the way to the rest; bought the A. A. tickets which we bought, and took positions on the League, the A. A., and the teams. We only had to be shown once, for thereafter we were one of the most active classes the School ever had. And then, how well we remember the day the Sophomores sent us their "Ultimatum." Oh, yes—we made short work of the sophisticated Sophs. It was a few days later that we met and vanquished war for so decisively that the Sophs refused to take advantage of the snow that fell a day or two later, to have battle with us. And then the exams! . . . That vanquished so many of us that we only had thirty left for the second year.

In that year we were the sophisticated Sophomores, and the Freshmen had to be—and were—taught the Golden Rules formulated for them. It was very early in the year when we started and we kept at it until Thanksgiving Day. It surely was such a day for the Freshmen. To cap the activities the whole class staged a burial of a Fresh at the Entertainment and set the audience roaring with their speeches and antics. In the second year we were no longer backward in taking part in the extra-curricular activities. The class of '24 was well represented on the Pioneer, Students League, and athletics. It was really surprising what such a small class did. And again the exams—and there were only twenty-three left, the Chemistry section suffering most, with only one man left—but he was a good man!

The third year began with the remainder of the class taking even a more active part in the School work. The CANA had been added to the list of activities that were taken care of so well by the Class of '24. The Junior Prom was made a gala affair that year. It was the first formal Prom in Cooper Union. We thought that no more men would be cut down by the exams, but we found only eighteen left to face the fourth year, the Chemistry student still going strong.

And then the Senior year—that goal to which all Freshmen aspire. Again the class took its share of the activities of the School. Plans for a formal Senior Banquet and Dance were soon completed. The Thanksgiving Entertainment was made wholly interesting by the "radio broadcast" program by the Class of 1924, from Station C.U.I.T. My!—But that was a masterpiece. The Banquet and Dance was held on the 29th of March at the Hotel McAlpin. It was a fitting end to four most eventful years.

THE HISTORIAN.

Electrical Engineering, 1924

Officers

MARTIN L. ORNER.....	<i>President</i>
ARTHUR W. CARLSON.....	<i>Vice-President</i>
HERRERT CASTELLANI.....	<i>Treasurer</i>
WILLIAM F. VICTOR.....	<i>Secretary</i>

History is no mere statement of facts—it is a translation of them. The keener our vision, the more we shall see that history is written more for the present and future than for the past; that it is living not static; that it becomes prophecy and revelation. We have had glimpses and provisions, true, but the history of the Class of E. E. '24 has not been written—and cannot be written until the last man in it is dead.

There is not room on this page to write a chronology of events that make our class record. That has been partly done in former histories. These events are but a foretoken; the vaster history, yet unborn, lying in our brains and hearts, will be written on the face of the world in letters each of which will be a man, in sentences each of which will be the coöperative work of men—and it will be an ever present stamp of Cooper. She has given us our talents—our history is their multiplication. She has made it possible to make friends of men who are to be leaders in all the walks of life; to lose ourselves in generous enthusiasm and coöperation with others for common ends; to form character under professors who are men. This she has given us—our duty, and our history will be to live it out.

Nineteen twenty-four has had a wonderful spirit—a unity of ideal and purpose. Our past is rich, our future is rich; what more could a class wish? Then here's to our Alma Mater.

THE HISTORIAN.

General Science, 1924

Officers

A. E. DE CAMB.....	President
MILTON ARMBRISTON.....	Vice-President
WIL. J. MAHON.....	Treasurer
CHAR. A. GRAMLING.....	Secretary

C. U. S. L. Delegates

HENRY J. MANNIN	SIMNEY B. BROWN
LOUIS SOLOMON	

One evening early in the fall of nineteen nineteen there entered into the halls of Cooper a class quiet in bearing but with a spirit within, that was destined to carry it to the highest pinnacle of success.

During the first year we built a foundation of the class of such construction that it would withstand any storm. As with every other class we entered our second year "sadder and wiser," sadder because of our casualties and wiser because we had the splendid teaching that only Cooper can give.

The second year saw the first evidence of that "inner spirit" trying to assert itself, and the records show that its success was far beyond the highest expectations of the class. It brought about the organization of the class, a thing almost unheard of in those days, and it gave the class the honor of heading the list of Cooper's "Field Day Winners."

Now as the pages of history were turned, we stood at the second milestone, knowing that the race we were running was being won. As the third year was started, a new member was welcomed (?) who was a bosom friend of the faculty. Her figure was graceful and charming, resembling the letter S. She was known as DAME Calculus, and unfortunately many of our members fell for her vampish ways, fell so deeply in love with her that they decided to pay her court for another year. The class dinner held that year was a splendid success and everyone had such a pleasant evening that it was decided to run a dinner every year.

Our Junior year showed that the class was growing stronger every day. The halls of Cooper were echoing with the words "WHAT WILL THE CLASS OF '24 DO NEXT?" The answer was soon given when the class gave out details of the Junior Promenade. Words fail to do full justice to that affair and only those who were there can fully realize what an enjoyable promenade it was. Their memories often carry them back to that gala evening. Incidentally, it was the first formal affair ever held by Cooper and the experiment proved that they could be outstanding successes. The Class held their annual dinner, repeating the success of the previous year.

Now the Class looks ahead and almost within reach is the goal we have striven for during the last five years. Up to the time this CLASS goes to press our Senior year has brought forth another triumph for the Class. Our formal Senior dance was held at the Hotel Plaza and remarks were heard on all sides that this affair was even more successful than our Junior Prom. The historian's opinion is that by comparing the two it is not belittling either, for they both will go down in the history of the Class as well as Cooper's.

As undergraduates we are about ready to write "finis" to our history, but as members of our "Alma Mater" Cooper will hear very often of her sons of '24.

THE HISTORIAN.

Architecture, 1924

Officers

PETER J. LONGO.....	President
J. L. LEWIS.....	Vice-President
CHAS. F. SIEGEL.....	Treasurer
ERNEST J. PETERSON.....	Secretary
HENRY F. JOHNSON.....	Assistant Secretary

Delegates to C. U. S. L.

P. J. LONGO

SOS. BAKER

THE HISTORY OF OUR CLASS—1924—would take many pages to recount in full. "Brevity is the soul of wit" we are told, and, mindful of this, let us dwell upon the more important events which occurred in our four short years.

In 1920 we assembled in the great hall of Cooper Union, unknown to one another, but each and every one of us full of zeal; ambitious to perpetuate the good name of our founder, Peter Cooper; and to uphold the high scholastic requirements of our school, Cooper Union. This, our first year, passed quickly, and, in competition with upper classmen, our class gained its first laurels, being awarded prizes and meritorious mention.

October, 1921, we became Sophomores—again we met! This time out of the plebe class, scrutinizing the poor Freshmen, envious of the upper classmen who were so much nearer to the goal. Our class diminished few in numbers this year, and so we arrive at the year of all years—Junior! Two more full semesters and we trust our indulgent instructors and faculty may look down upon us graciously—"All work and no play make Jack a dull boy."

Our first two years were years of "plugging," but we realized that social events enter at proper times in the curriculum of a school. Our hard working committee arranged the most wonderful—yes, the best—Junior Prom ever held by a Cooper Union class. Under and upper classmen envied us, but even so we showed them the real spirit of our class. The "Prom" was a success, enjoyed by all and will always be remembered as the "night of nights." The wee small hours of the morning—the sun was announcing the advent of another day and the milkman delivering and dropping milk bottles—when the strains of "Home, Sweet Home" were heard, and all present agreed that they had a real good time, good music, good company and good dancing. Some of our classmates—embryonic Olympic victors—represented us in athletic competition and very creditably accounted for themselves and the school.

May, 1923, and we enter upon the last vacation period of our course. All of us agreed when we met in October, 1923, that the time went so slowly. We are anxious, one and all of us, to obtain our diplomas. And now we are once more assembled ready to cope with the major problems of house construction and designing, and put into actual practice the theoretical instruction of the past three years.

We had our Senior dance. It was a "corker" and all praise must be given the class for the spirit and cooperation rendered, which enabled the committee to make the occasion so enjoyable. In a few short months we shall—those of us who are fortunate—graduate, but never shall we forget the painstaking instruction of our faculty, and we shall be ever mindful of the practices and precepts of one who made this instruction possible—Peter Cooper.

THE HISTORIAN.

The SENIORS



FRANK AUTHOR
"Frank"
Chemistry
Class Secretary, '20-'21.



FRANCIS P. CAREY
"Carey" ΩΔΦ
Chemistry
Class Secretary, '19 to '21; Chairman Ex-
ecutive Committee, '20-'21; President,
Newman Club.



JEROME DOHAN
"Jerry" ΑΜΣ
Chemistry
Class President, '22-'23; Class Treasurer,
'18-'19; C. U. S. L. Delegate, '21-'22;
Corresponding Secretary, C. U. S. A. O.,
'21-'22; Junior Prom. Committee, '22-
'23; Year Manager, Pioneer, '21 to '22;
Official Basketball Scorer, '21-'22-'23-'24;
Assistant Football Manager, '22-'23; Class
Athletic Committee, '21 to '24; C. U.
Class. Sec.



JOHN P. DUNNE
"Dunne"
Chemistry
Newman Club; Cooper Union Chemical
Society.

The SENIORS



WILLIAM G. HOYER
"Bill" $\Delta\Delta$
Chemistry

Class Treasurer, '21-'22-'23-'24; Cooper
Union Chemical Society.

BENJAMIN H. JOSEPH
"Benny" $\Delta\Delta$
Chemistry

C. U. Chem. Soc., Pres., C. U. S. L., '23;
Bus. Man., C. U. S. L., '24-'25; Rec. Sec.,
C. U. S. L., '21-'22; C. U. S. L. Delegate,
'20-'21-'22; C. U. N. A. O. Delegate, '19-
'20-'21-'22-'23; Captain Junior Varsity,
'19-'20-'21; Junior Basketball Team, '19-
'20-'21-'22-'23; Track Team, '21-'22; Asst.
Mgr. Basketball, '22.



ARTHUR H. KOPP
"Art" $\Omega\Delta\Phi$
Chemistry

Football Manager, '21-'22; Class Board,
'22; Cooper Union Chemical Society;
Class Secretary.

HAROLD I. MERRITT
"Merritt" $\Omega\Delta\Phi$
Chemistry

Class President, '20-'21.

THE SENIORS



IRVING REICHMAN

"Reich"

Chemistry

Treasurer of the former Cooper Union
Dramatic Soc., '20-'21.



GEORGE REINHARD

"Reinie"

ΩΔΦ

Chemistry

C. U. S. L. Delegate, '22-'23; Comm. Sec.
C. U. S. L., '22-'23; Photo Ed. Comm.,
'23; Business Comm. C. U. S. L., '23-'24;
C. U. Chem. Soc.



EDWARD H. SCHMIDT

"Ed."

Chemistry

Cooper Union Chemical Society.



ARTHUR F. SELTENREICH

"Selty"

ΩΔΦ

Chemistry

Consulting Ed. Comm., '23; Senior Ed.
Comm., '24; Entertainment Comm., '21-
'22-'23-'24; Class Vice-President, '23-'24;
Cooper Union Chem. Soc.

THE SENIORS



LOUIS SOLOTOROFF
"Louis" ΑΠΣ
Chemistry
Junior Basketball Team, '18-'20-'21; Mgr.
Junior Basketball Team, '21-'22; Mgr.
Varsity Basketball Team, '22-'23; C. U.
S. L. Delegate, '21-'22-'23-'24; C. U. N.
A. O. Delegate, '18-'20-'21-'22-'23; Gradu-
ation Comm., '24; Chairman Key Comm.,
'24; C. U. Chem. Soc.



HENRY STEIN
"Stein"
Chemistry

Cooper Union Chemical Society.



RALPH C. URBAN
"Ralph"
Chemistry

Cooper Union Chemical Society.



GEORGE N. VACCA
"George" ΩΔΦ
Chemistry

Class Vice-President, '20-'21-'22-'23; Class
President, '21-'22-'23-'24; Sec. Newman
Club, '23; Pres. Newman Club, '24;
Cooper Union Chem. Soc.

The SENIORS



OTTO AIMONE

"Otto" ΣΤΠ
Institute of Technology—M. E.
 C. U. S. L. Delegate, '20-'21-'22; Class
 President, '21-'22; C. U. S. C. Delegate,
 '21-'22-'23-'24; C. U. S. C. Vice-Presi-
 dent, '23-'24; Executive Comm. C. U. S.
 C., '23-'24; A. S. M. E. Delegate, '23-'24;
 Advertising Mgr. Cassa, '24.

CHARLES BAYERS

"Charlie"

Institute of Technology—E. E.
 Student Branch A. I. E. E.; Editorial
 Staff Pioneer, '23-'24.



NICHOLAS CONTINO

"Nick"

Institute of Technology—E. E.
 Student Branch American Institute of
 Electrical Engineers.

RALPH A. DANE

"Ralph" ΣΤΠ

Institute of Technology—M. E.
 Sec. C. U. A. A., '22-'23; Asst. Basket-
 ball Mgr., '22-'23; Basketball Mgr., '23-
 '24; Class President, '22-'23; Class Treas.,
 '23-'24; Student Branch, A. S. M. E.

The SENIORS



EDWARD B. FITZPATRICK
"Eitz" ΣTP
Institute of Technology—C. E.

Baseball Team, '20-'21-'22-'23-'24; Orchestra, '23-'24; Civil Engineering Association.



CARL H. HACK
"Hack" ΣTP
Institute of Technology—Ch. E.

President Chemical Club, '22-'23; Executive Comm. C. U. A. A., '23-'24; Asst. Mgr. Truck Team, '23-'24; C. U. S. C. Delegate, '22-'23-'24; C. U. S. L. Delegate, '20-'21-'22.



FREDERICK G. HEYDT
"Fred" ΣTP
Institute of Technology—M. E.

Class President, '23-'24; Vice-President Student Branch, A. S. M. E., '23-'24.



HENRY J. HOFFMAN
"Henry" $\Lambda M \Sigma$
Institute of Technology—E. E.

Ed-in-Chief, Pioneer, '22-'23; Managing Ed. The Pioneer, '21-'22; Circulation Mgr. The Pioneer, '20-'21; Corres. Sec. C. U. S. L., '21-'22; C. U. S. L. Delegate, '20-'21; C. U. S. C. Delegate, '22-'23-'24; Scholarships, '22-'23-'24; Vice-President Student Branch A. I. E. E., '23-'24.

The SENIORS



WILLIAM S. HOFFMAN
"Bill"

Institute of Technology—C. E.
Class Basketball Team, '23-'24; C. U. S.
C. Delegate, '23-'24; C. U. Civil Engi-
neering Association.

DANIEL MOORE

"Dinty" ΣTP
Institute of Technology—M. E.
Baseball Team, '23-'24-'25-'26; Asst.
Baseball Mgr., '25-'26; Fin. Sec. Athletic
Association, '23-'24; Student Branch A.
S. M. E.



RICHARD C. MUGLER
"Dick" ΣTP
Institute of Technology—C. E.

Class Sec., '23-'24; C. U. S. C. Delegate,
'22-'23-'24; C. U. Civil Engineering Asso-
ciation.

ARTHUR E. PRINCE
"Arty" ΣAH
Institute of Technology—E. E.

Basketball Team, '21-'22-'23-'24; Capt.,
'23-'24; Class Basketball Team, '20-'21-
'22-'23-'24; Numerals, '21-'22; Pres. A.
A., '23-'24; Vice-President A. A., '22-'23;
A. A. Delegate, '20-'21-'22; Publication
Mgr. Student Branch A. I. E. E., '22-'23;
Class Sec., '21-'22-'23; Orchestra, '20-'21-
'22; C. U. S. C. Delegate, '23-'24.

The SENIORS



DAVID T. SAMSON

"Sammy"

Institute of Technology—E. E.
C. U. S. C., '22-'23; Treas. C. U. S. C.,
'23-'24; Calculus Medal, '22-'23; Scholar-
ship, '23-'24; Exchange Ed. Pioneer, '23-
'24; Athletic Ed. Pioneer, '23-'24;
Senior Class Ed. Cam., '24; Student
Branch A. I. E. E.

HERMAN STEMPEL

"Stemp"

ΣΠ

Institute of Technology—M. E.
Class Vice-President, '23-'24; Student
Branch, American Society of Mechanical
Engineers; Student Branch American
Institute of Electrical Engineers.



HARRY E. THOMPSON

"Tommy"

ΣΑΠ

Institute of Technology—E. E.
Basketball Team, '21-'22-'23-'24; Class
Basketball Team, '20-'21-'22-'23-'24;
Nomenclature, '21-'22; C. U. S. I. Delegate,
'20-'21-'22; C. U. S. C. Delegate, '22-'23;
Pres. C. U. S. C., '23-'24; Class Vice-
President, '21-'22; Sec. Student Branch
A. I. E. E., '22-'23.

ARTHUR WESTENBERGER

"Westy"

Institute of Technology—E. E.
C. U. S. C. Delegate, '22-'23; Consulting
Ed. Cam., '23; Class Vice-President,
'23-'24; Student Branch American In-
stitute of Electrical Engineers.

The SENIORS



ISAAC ASOFSKY

"Isaac"

Electrical Engineering

Student Branch American Institute of Electrical Engineers.

RALPH S. HAIR

"Ralph"

Electrical Engineering

C. U. S. I. Delegate, '16-'17; Leave of absence, '17-'18; '22-'23; Paper Comm. Student Branch A. I. E. E., '21-'22.



JOHN A. BOROKHOVICH

"John"

Electrical Engineering

Orchestra, '18-'20-'21; Student Branch American Institute of Electrical Engineers.

EDWARD BRODY

"Ed."

Electrical Engineering

Class Basketball Team, '13-'14-'15-'16; Student Branch American Institute of Electrical Engineers.

The SENIORS



ARTHUR W. CARLSON
"Art" ΩΔΦ

Electrical Engineering
C. U. S. L. Delegate, '20-'21-'22; Varsity Football "C," '21-'22-'23; Junior Varsity Basketball "C. B. B.," '20-'21; Class Basketball Team Capt., '21-'22-'23-'24; Track Team, '22-'23; Sports Ed. Pioneer, '21-'22; Associate Ed. Pioneer, '22-'23; Class Vice-President, '23-'24; Sec. Student Branch A. I. E. E., '23-'24.

HERBERT CASTELLANI
"Herb" ΩΔΦ

Electrical Engineering
Class Treas., '23-'24; Chairman Entertainment, '23-'24; Pioneer reporter, '22-'23; C. U. S. L. Delegate, '21-'22; Student Branch A. I. E. E.



JOHN E. CRUICKSHANK
"Jack" ΩΔΦ

Electrical Engineering
Track Team, '21-'22; Graduation and Key Comm., '24; Student Branch American Institute of Electrical Engineers.

HENRY ELIASSEN
"Henry"

Electrical Engineering
C. U. S. L. Delegate, '19-'20-'21; Class Pres., '20-'21-'22; Bus. Mgr. Pioneer, '21-'22; Bus. Mgr. CARL, '23; Membership Comm. Student Branch A. I. E. E., '22-'23.

The SENIORS



CHARLES WESLEY HILLIARD
"Wes" ΩΔΦ
Electrical Engineering
C. U. S. L. Delegate, '16-'20.

JOHN M. HUDACK
"John"
Electrical Engineering
Student Branch A. I. E. E.



EDWARD J. KENNEDY
"Boss"
Electrical Engineering
Pres. Student Branch A. I. E. E. '22-'24.

J. J. NEUMAN
"Neuman"
Electrical Engineering
Student Branch A. I. E. E.

The SENIORS



MARTIN L. ORNER

"Marty"

AMΣ

Electrical Engineering

Campus Players, '21-'22; Circulation Mgr. *Cause*, '22-'23; Class Vice-Pres., '21-'22-'23; Class Pres., '23-'24; C. U. S. I. Delegate, '22-'23; Vice-Pres. C. U. S. I., '23-'24; Student Branch A. I. E. E.



CHARLES ROSENKRANZ

"Bossy"

Electrical Engineering

Student Branch American Institute of Electrical Engineers.



EDWARD W. M. SCHIEMER

"Ed."

Electrical Engineering

Class Sec., '2-'22; Student Branch American Institute of Electrical Engineers.



CHARLES F. SCHMID

"Charlie"

ΣTP

Electrical Engineering

C. U. S. I. Delegate, '19-'20-'21; Class Treas., '21-'22; Class Pres., '22-'23; Chairman Entertainment Comm., '21-'22; Chairman Junior Promenade Comm.; Editor-in-Chief *Cause*, '23; Senior Dances Comm.; Associate Ed. Pioneer, '23-'24; Class Basketball Team, '21-'22-'23; Student Branch A. I. E. E.

THE SENIORS



MATTHEW TROSTER

"Matty"

Electrical Engineering

Class Basketball Team, '23-'24; Student Branch American Institute of Electrical Engineers.

WILLIAM F. VIETH

"Fred"

Electrical Engineering

C. U. S. L. Delegate, '23-'24; Asst. Mgr. Basketball Team, '23-'24; Junior Varsity, '23-'24; Class Sec., '23-'24-'25; Asst. Athletic Ed. Comm., '23; Class Basketball Team, '23-'24-'25-'26; Student Branch A. I. E. E.; C. U. S. L. Entertainment Committee, '23-'24; Chairman Interclass Basketball Tournament; Jr. Varsity Basketball C., '24; Mgr. Basketball, '24.



HUGO L. WALTER

"Hugo"

Electrical Engineering

Cooper Union Students League Delegate, '23-'24.

HERBERT G. WIELAND

"Herb"

Electrical Engineering

C. U. S. L. Delegate, '23-'24-'25; Treas. C. U. S. L., '24; Varsity Football "C," '23-'24-'25; Capt. Varsity Football, '22; Pres. C. U. N. A. O., '23; Student Branch A. I. E. E.; Chairman Athletic Committee, '24.

The SENIORS



ARTHUR WICHMAN
"Art"

Electrical Engineering



MILTON S. ABRAMSON
"Milton"

Civil Engineering

C. U. S. L. Delegate, '21-'22-'23-'24; Track Team, "C. T. T.", '22-'23; Currier, Sec. C. U. S. A. O., '22-'23; Athletic Comm., '23-'24; Asst. Sports Ed. Pioneer, '23-'24; Class Vice-Pres., '23-'24; Asst. Mgr. Basketball, '22-'23; "Chd"; Mgr. Basketball, '23-'24, "C"; C. U. Civil Engineering Association.



MAX ALPERIN
"Max"

Civil Engineering

C. U. Civil Engineering Association.



HAROLD E. BARNETT
"Barnes"

Civil Engineering

C. U. Civil Engineering Association.

The SENIORS



NATHAN BIRNBAUM

"Nat"

Civil Engineering

C. U. Civil Engineering Association.

NATHAN BRODKIN

"Brodtkin"

Civil Engineering

C. U. S. L. Delegate, '21-'22; C. U. Civil Engineering Association.



SIDNEY R. BROWN

"Sid"

AMΣ

Civil Engineering

Class Pres., '20-'21; C. U. S. L. Delegate, '21-'22-'23-'24; C. U. Civil Engineering Association.

ELMER W. DUNCANSON

"Elmer"

ΩΔΦ

Civil Engineering

Baseball, '22; C. U. Civil Engineering Association; Member Interclass Basketball Champions, '21.

The SENIORS



SIEGFRIED HOFMANN
 "Sig" ΦTK
Civil Engineering
 C. U. Civil Engineering Association.



G. GEORGE KRUEGER
 "George" ΩΔΦ
Civil Engineering
 Track Team, '21; C. U. Civil Engineering Association.



CHARLES MORE
 "More"
Civil Engineering
 C. U. Civil Engineering Association.



CHESTER MUELLER
 "Chet" ΣΤΦ
Civil Engineering
 Class Vice-Pres., '21-'22; Class Treas., '22-'23; Pioneer reporter, '22-'23; Camp Athletics Ed., '23; C. U. Civil Engineering Association.

The SENIORS



CARL A. PETERSON

"Carl"

Civil Engineering

C. U. Civil Engineering Association.

MICHAEL PRUZANSKY

"Pru"

Civil Engineering

C. U. Civil Engineering Association.



FRANK C. SCHLINDWEIN

"Frank"

Civil Engineering

C. U. Civil Engineering Association.

HARRY L. VOGEL

"Harry"

Civil Engineering

C. U. Civil Engineering Association.

The SENIORS



JAMES B. COLLINS

"Collins"

Mechanical Engineering

Graduation and Key Comm., '24; Student Branch A. S. M. E.

EDWIN H. DAFTER

"Daft"

Mechanical Engineering

Student Branch American Society of Mechanical Engineers.



ARTHUR E. DeCARO

"Artie"

ΩΔΦ

Mechanical Engineering

C. U. S. L. Delegate, '20-'21-'22-'23; Class Vice-Pres., '20-'21; Class Pres., '21-'22-'23-'24; Class Sec., '22-'23; Bus. Mgr. Pioneer, '22-'23; Adv. Mgr. Pioneer, '23-'24; Chairman Graduation Comm., '23-'24; Student Branch A. S. M. E.

NICHOLAS DeMAIO

"Nick"

Mechanical Engineering

Student Branch American Society of Mechanical Engineers.

The SENIORS



CHARLES A. GRAMLING
 "Charlie" ΩΔΦ
Mechanical Engineering
 Sec., Student Branch A. S. M. E., '21-'22; Chairman, Student Branch A. S. M. E., '22-'23; Class Sec., '23-'24; Student Branch American Society of Electrical Engineers.



BENJAMIN KATCHER
 "Katch" AMV
Mechanical Engineering
 C. U. S. L. Delegate, '18-'22; Junior Varsity, '19-'20-'21-'22; Capt. Junior Varsity, '21; Interclass Basketball Champions, '21; Student Branch A. S. M. E.



JOSEPH LUBITZ
 "Joe"
Mechanical Engineering
 C. U. S. L. Delegate, '20-'21-'22; Student Branch American Society of Mechanical Engineers.



WILLIAM J. MAHON
 "Bill" ΩΔΦ
Mechanical Engineering
 Class Treas., '21-'22-'23-'24; Class Pres., '22-'23; Chairman Senior Dance Com., '24; Student Branch A. S. M. E.

The SENIORS



HENRY G. MANKIN

"Mank"

Mechanical Engineering

C. U. S. L. Delegate, '18-'20-'21-'22-'23-'24; Ed-in-Chief Courier, '21; Chairman Founders Day Celebration, '23; Class Sec., '22-'23-'24; Student Branch A. S. M. E.



J. C. MUNTEFERING

"Munte"

Mechanical Engineering



CHARLES P. NAEGELI

"Naegeli"

Mechanical Engineering

Student Branch A. S. M. E.



WILLIAM C. PUDER

"Will"

Mechanical Engineering

Student Branch A. S. M. E.

The SENIORS



J. D. RICHMOND
"Richmond"
Mechanical Engineering
Student Branch A. S. M. E.

SAM E. BUSINOFF
"Bus"
Mechanical Engineering
Student Branch A. S. M. E.



ROBERT SALMONSEN
"Salmonsen"
Mechanical Engineering
Student Branch A. S. M. E.

LOUIS J. SOLOMON
"Mike"
Mechanical Engineering
C. E. S. E. Delegate, '20-'21-'22-'23-'24.
Student Branch A. S. M. E.

The SENIORS



LEONARD VIETH

"Len"

Mechanical Engineering

Junior Varsity Basketball Team, '23-'24;
Mgt. Football Team, '24; Capt. Inter-
class Basketball Champions, '24; Student
Branch A. S. M. E.

ANTHONY ALBERTI

"Tony"

Architecture



ISAAC ALLEN

"Elyon"

Architecture

CHARLES BRANDL

"Charlie"

Architecture

The SENIORS



L. H. BULHACK
"Chief"
Architecture
Class Treas., '32-'33.

ANTHONY CAVALIERI
"Tony"
Architecture



H. H. CHRISTANSEN
"Chris"
Architecture

CASPER F. COLLA
"Colla"
Architecture

The SENIORS



FRANK COSTARELLI
"Cashier Oil"
Architecture
Class Vice-Pres., '23-24.

ANTHONY CURIALE
"Tony"
Architecture



ADAM DOBBERSTEIN
"Artie"
Architecture

GERALD DUXBURY
"Jerry"
Architecture

The SENIORS



HAROLD E. FLAHERTY

"Whitey"

Architecture

Class Pres., '22-'23; Graduation Emblem
Standardization Comm., '23-'24; Senior
Dance Comm., '23-'24; Class Historian,
'24.

PHILIP FORCINO

"Phil"

Architecture



WALTER GLESSOF

"Walter"

Architecture

Junior Basketball Team, '23-'24.

ELMER L. HENN

"Booster"

Architecture

The SENIORS



WILLIAM HOLECK
"Gimme"
Architecture



HENRY F. JOSEPH
"Joe"
Architecture
C. U. S. L. Delegate, '23-'24; Asst. Sec.,
'23-'24; Class Organizer.



JOHN J. KELLEHER
"John"
Architecture



RUDOLPH KUX
"Valentina"
Architecture

The SENIORS



JOSEPH L. LEWIS

"Joe"

Architecture

Class Vice-Pres., '23-'24; Graduation
Emblem Standardization Comm., '23-'24



PETER J. LONGO

"Pete"

Architecture

Class Pres., '23-'24; Graduation Emblem
Standardization Comm., '23-'24; Senior
Dance Comm., '24; C. U. S. L. Delegate,
'23-'24; Banner Comm., '23-'24.



FRANK LO PRESTO

"Frank"

Architecture



JOHN J. LOUGHNANE

"John"

Architecture

Class Pres., '22-'23; Class Historian, '22-
'23; Banner Comm., '23-'24; Class Comm.,
'23-'24.

The SENIORS



W. J. MODIN
"Modin"
Architecture



ROBERT PAYNE
"Bob"
Architecture
Banner Comm., '23-'24.



FRANK X. PEREMI
"Here"
Architecture



ERNEST J. PETERSEN
"Pete"
Architecture
Class Vice-Pres., '23-'24; Class Sec., '24;
Class Historian, '23-'24; Senior Dance
Comm., '24; Banquet Reception Comm.,
'24.

The SENIORS



MILTON M. ROFF
"Mit"
Architecture



GEORGE ROSTAD
"George"
Architecture



N. J. SAPIENZA
"Kid Sap"
Architecture
Class Sec., '23-'24.



HENRY B. SCHUTT
"Shaut"
Architecture
Class Organizer Camx, '24.

The SENIORS



MORRIS SILVERSMITH
"Goggles"
Architecture



MAURICE SMITH
"Ink"
Architecture



ISRAEL THELLER
"Spitz"
Architecture



RAYMOND THOMAS
"Ray"
Architecture

The SENIORS



EDWARD WHITEHEAD
"Ed."
Architecture
Class Sec., '22-'23.

SIMON ZELNIK
"Skj"
Architecture
Class Pres., '20-'21.

THOMAS ANDERSON
"Andy" *Mechanical Engineering*

STANISLAW CZARNECKI
"Stan" *Architecture*

SOLOMON ASKOWITZ
"Ask" *Chemistry*

ERNEST E. DePIAZZA
"Ernie" *Architecture*
Junior Basketball Team, '23-'24.

SOLOMON BASEN
"Sol" *Architecture*
Basketball, '22-'23-'24; C. U. S. L. Delegate, '22-'24.

MAX EHRLICH
"Max" *Electrical Engineering*
Student Branch A. E. E. E.

MORRIS W. BLAUFARB
"Blaufarb" *Chemistry*

WALTER FIDELIUS
"Fido" *Mechanical Engineering*

THOMAS A. BROWN
"Brown" *Architecture*

FRANK P. GILL
"Frank" *Chemistry* QJΦ

MORRIS A. BUNNIS
"Morris" *Civil Engineering*
C. U. S. L. Delegate, '18; C. U. Civil Engineering Association.

THOMAS F. GILLIGAN
"Gilligan" *Mechanical Engineering*

JOHN CHAKIN
"Jack" *Architecture*

LOUIS GOLDSCHMIDT
"Goldie" *Chemistry*

THE SENIORS

RUDOLPH GOTTFRIED
"Gottfried" *Mechanical Engineering*

D. GOTTLIEB
"Gottlieb" *Architecture*

ALEXANDER GOTZDANKER
"Gots" *ASCE*
Institute of Technology
Managing Ed. *Pioneer*, '23-'24; Asst. to
Ed. *Pioneer*, '21-'22; Mechanics Medal,
'21; Scholarship, '24; Trans. Student
Branch A. I. E. E., '23-'24.

CHRISTIAN P. HANSEN
"Chris" *ΩΔΦ*
Electrical Engineering
Student Branch A. I. E. E.

JAMES F. HUVANE
"Jim" *Mechanical Engineering*

JACOB KATZMAN
"Kitty" *Electrical Engineering*
Student Branch A. I. E. E.

ADRIAN J. KELLY
"Kel" *Mechanical Engineering*

BENJAMIN LEVINE
"Ben" *Electrical Engineering*

A. D. LEWIS
"Lewis" *Architecture*

DAVID LICHTENSTEIN
"Lich" *Institute of Technology*
Student Branch A. S. M. E.

J. LOCANTORE
"Locantore" *Architecture*

WALTER LONGNECKER
"Pop" *Chemistry*
C. U. S. L. Soc.

THOMAS P. McLAUGHLIN
"Mac" *Architecture*

CHARLES A. MARTIN
"Martin" *Mechanical Engineering*
C. U. S. L. Delegates, '21-'22.

DANTE MELLI
"Melli" *Architecture*

ANDREW MILLER
"Andy" *Architecture*

A. A. MILLER
"Miller" *Architecture*

ROBERT R. MONTIETH
"Bob" *Mechanical Engineering*

EMIL MOIR NOLL
"Noll" *ΩΔΦ*
Chemistry

MURRAY C. PINE
"Pine" *Architecture*

ABRAHAM L. PROBER
"Ale" *Architecture*

SAMUEL REISS
"B. V. Da" *Architecture*
Enslens Committee.

J. SCORZELLO
"Shorty" *Architecture*

FERDINAND SEGMOND
"Segmond" *Architecture*

CHARLES SIEGEL
"Charley" *Architecture*
Financial Sec., '23-'24.

IRA STIGLITZ
"Ira" *Architecture*

VICTOR SUBRIZI
"Subrizi" *Electrical Engineering*

VICTOR TURNER
"Turner" *Mechanical Engineering*

H. ZARAFU
"Zarafu" *Mechanical Engineering*

JUNIOR PROMENADE



The Junior Promenade



February Ninth

Nineteen hundred and twenty-four

St. Regis Hotel

COMMITTEE

LILLIE HIRSCHER, *Chairman*

JOHN BATTLE

ROBERT J. BURRICK

IRVING I. GREENBERG

ALBERT G. HERLING

CHARLES HAMMERSON

FREDERICK C. KUTH

FRANK LAMIA

SEBASTIAN MURRETT

SYDNEY OCHS

ON a Saturday evening of February in the present Leap Year, the Juniors ried with each other to trip most fantastically at their promenade. It was one of "those" nights, or rather it was an "Arabian night," so enchanting to cause the most solemn of knights to bestride his steed (or perhaps a taxi) and escort the fair princess of his heart to the court of St. Regis. The ballroom of the court was resplendent with banners denoting the sections from whence these cavaliers had hailed. Gorgeous were the gowns of the damsels and more exquisite their complexions. But the knights were not aubone wearing softly worn, delicately lined suits of armor.

Tantalizing music filled the ballroom with awaying figures, and gazing into each eye, one could see happiness and enjoyment shining forth like a bright star therefrom. Hilarity reigned supreme. Among the mirth frenzied mob we espied several of our learned and dignified educators. To them due respect was shown, but, as with us, convention had loosened her strings.

Numerous fantasies were injected into the program of joy. One of these fantasies is worth while mentioning here, as the fair sex broke a modern tradition. They were given the opportunity of choosing their partners, but did not take advantage of the opportunity. The circumstances were reversed. Can one say the knights acted likewise!

A most wonderful nectar was served and thoroughly enjoyed. The time arrived when all good knights and well behaved maidens should retire. They did retire, and with deep, profound regrets, but cannot state the exact hour as we know not whither they went.



INSTITUTE OF TECHNOLOGY CLASS OF 1915
DANCE HELD AT HOTEL MCALPIN

Institute of Technology

DANCE OF '23

Committee

HERBERT ROEWELLE, Chairman

F. A. LoPINTO

L. SACCH

W. W. MATHER

THE long post-up social spirit of the Class of '23, Institute of Technology, had a chance to effervesce at the first Class Dance, held at the Hotel McAlpin on Friday evening, February 3, 1924.

It was a gala affair, full of fine joyousness and hilarity, with utter disregard of studies, past and present. There was color and life and noise, a great deal of each and in just the right proportion to blend harmoniously.

The most memorable feature of the affair was the ability of the committee, with so small an expenditure, to do so much. The music was entrancing; those lame brothers who had never been able to dance before, found to their surprise, that they simply glided along without any effort, under the influence of that music. The room was so attractively decorated that no one at any time felt any desire to go wandering through other parts of the hotel. And the punch—its flavor was all that could be expected of punch these days. In the choice of souvenirs, the committee really excelled itself. The noisy little dolls that were presented to the ladies, and the monogrammed cigarette mouthpieces for the gentlemen, were strikingly appropriate. The additional noisemakers—balloons and streamers—and in such quantities—all tended towards the complete success.

From the first strains of the initial dance to the last echo of "Home, Sweet Home," it was a most enjoyable affair, and one that will long be fondly remembered by every one of the participants.



JOHN WEBER
President
Architectural '25



LEWIS FIDLGOTZ
President
Chemical '25



WM. J. HARBERS
President
General Science '25



J. V. CLEARY
President
Electrical Engineering '25



MATTHEW GLUCK
President
Inst. Technology '25

The JUNIORS



Chemistry Class of 1925

Officers

L. FIDELGOLTY.....	President
R. J. BURRICK.....	Vice-President
E. SCHILLER.....	Secretary-Treasurer

Entertainment Committee

E. WERLX R. J. BURRICK

C. U. S. L. Delegates

M. BRIDLOW F. CANNIZARO

Athletic Committee

L. FIDELGOLTY

A. HILBERT

R. J. BURRICK

JUST five years ago this class enrolled as embryo chemists vowed to bring fun to Cooper. We had endeavored to accomplish the latter on the various athletic teams and other organizations. The class was organized and a foundation was laid for the future. After a year's existence we became more closely knitted together. We held our first Class Dinner at the Biltmore. The social calendar also consisted of several theatre parties. The celebrities began to assume a front, and become prominent on the C. U. S. L. and C. U. N. A. O. The Class received added prestige due to good work by its members on all of the Varsity teams then existing.

A diminution of membership occurred in the third year due to the encumbrance of social activities to the pressure of studies. The efforts and success of the individual members of the class in school activities were nevertheless unaffected. We assumed a strong foothold in the organizations of the school and were runners-up in the inter-class basketball tournament.

In the fourth year there was a renewal of activities both social and otherwise. A notable event of the year was a visit to our only benedict's paradise. An extremely pleasant evening was spent. During January the class collaborated with the Engineering classes of 1923 and held a dance at Hotel Embassy. This year we became champion bowlers by defeating the pin splitters of Chem. '24 and our challenge has since never been questioned.

Our Junior year was a colorful one and its memory will be pleasantly cherished in the future. The class supported the *CARLX* whole-heartedly, having several editors appointed on the board. The majority of the members tripped fantastically at the Promenade. The social life this year has been fast and furious, and was indulged in by all despite the handicaps put upon us by the Profs. Our class basketball team held its own in the inter-class tournament. Likewise the bowling team still reigns supreme. All thoughts are now concentrated on becoming sedate, i.e., a Senior, and then to reap the harvest.

THE HISTORIAN.

Institute of Technology, Class of 1925

Officers

MATTHEW GLENN.....	President
HARVEY ROSENBERG.....	Vice-President
WALTER W. MEYER.....	Treasurer
THOMAS G. GUERIN.....	Secretary

CLASS histories are peculiar things. It seems that they must simply start off with the statement that on a certain lucky day in yesteryear the front door of the school opened and a wind (very ill) blew in, along with the dust, etc., some diverse particles of humanity—which particles became a new class of freshmen, noisy and headless as infants.

We cry out in protest against the very idea that the wind ever blew US into Cooper. No, indeed! 'Twas not the wind, but that frolicking, sea-going buck, who took us by the hand and showed us the way to Astor Place. We arrived some hundred strong but thru the machinations of evolution, revolution and consensus of opinion (the profs—not ours) we were reduced, chemically speaking, to a mere differential quantity of our original numbers. Consequently, last October, when the Class of 1925 returned from divers summer pursuits, thirty-six survivors patched the crack—of which one was a survivorette. (This means Miss Sawyer, not a new specimen of a tea-wallah.)

Being in a gloriously audacious mood, we set out, ready to sweep off the boards anything that might rise up and dispute our position as Juniors. Following this event (figuratively speaking, of course. We are not boards), we tried to get on speaking terms with that hunko, Calculus.

And the boys themselves! Oh! my! yes, the boys.

Harry Albert voyages daily from Staten Island and is a member of the basketball team.

Hector Aschman, owner of the only sandwich of the Institute, is an orator, politician and bottle washer, all in one.

Bosestein published this Class single handed with the help of the other members of the Class Staff.

Fredrick Bohrendorf, erstwhile math prodigy, is stepping out this year, and prefers a 200 in bowling to a mere 100 in rule.

Sid Arnold is a member of the track team, which is considerable for a man from Brooklyn.

Woe Eddie Carbone fills a man-sized place on the Varsity basketball team.

Louise Elbert is Editor of the *Phoenix* and is a hostess in the Council meetings. Very breezy.

Joe Featherline is the boy who won the war and the one who inspires Freddie at the bowling alley.

Math Gluck is the president of the class and a shark in most everything. His endeavors in the matter of the Class dance are to be commended.

Tommy Guerin is the secretary and does lots of other things, among which is his daily lecture on "Use of the Calc in Varsity Tying." MIM.

Barney Kamenetz is manager of baseball and Flushing. If any more were told of him he would call it a "dirty crack." HI.

Ed Rabble Harnel hails from Brooklyn, and up to the time of writing has memorized 471 formulas from the integral table and is still going strong.

Peter Kottling is the active president of the Chem. Club.

Ed Louise Lewis, alias Haelestrung, is the radio expert of the Class, and his latest development on untuned tuned radio frequency should land him in the hall of fame or jail.

Luke Lukacs, Charlie Nadler, George Spikis, Clancy Vander Voort and Dave Slaney are tireless members of the E. E. section.

Walter Meiers is the speed wagon of the Class.

Al Millag, optician, and Plaf Lo Pisto, poet, are the outstanding features of West New York. Plaf is also acquainted with Holokren.

Pete Peterson, from Rutgers, and Shap Shapiro, along with Ralph Schuchert, are the remaining individuals of the embryonic roof truss department.

Dof Sawyer, the one and only of the Class, and Al Mailman are also of the bottle-washer union, and they say that hydrogen sulfide is as bad for the complexion. Oh dear!

Louise Sachs works for the *Phoenix* or vice versa, and is musically inclined.

Frank Maslin and Charley Meyer are close friends although one is a resistance band and the other a boiler maker.

Herb Rosencole is the working vice-president, and with the help of Tommy Barrese has determined the coal consumption of many a power house by measuring the length of the company's wheelbarrows.

Electrical Engineering, Class of 1925

Officers

JAMES V. CLARKE.....	President
LESLIE HIRSCHEL.....	Vice-President
CLARK POOL, SR.....	Treasurer
CHARLES LINDBERG.....	Secretary

C. L. S. L. Delegates
JOSEPH H. MULLER
MORRIS ZIMMERMAN

A. J. E. R. Delegates
CHARLES LINDBERG
CHARLES FANGL

Entertainment Committee
LESLIE HIRSCHEL, Chairman
ALBERT G. HELDING

JOHN A. HAYES

FREDERICK C. KUCH

Athletic Committee
LESLIE HIRSCHEL, Chairman

JOHN J. COCKING
ANDREW A. GANNETT

JOSEPH H. MULLER
THOMAS BROWN

WELL! Now to continue with our history from where we were so sadly interrupted a year ago. At that time arrangements were being completed for the annual theatre and dinner party, which was held on March 19, 1923. The Class turned out strong and enjoyed an excellent dinner at Lyon's, after seeing the celebrated "Sally, Irene and Mary" at the Forty-fourth Street Theatre.

From then on the Class outlook upon life became more serious, for the much dreaded final exams began to loom upon the horizon. The majority settled down to real hard and earnest work until 10 P. M. the night of May 8. At that moment we were through with our exams and had nothing but summer skies to look forward to.

As a memorial to the occasion we promptly unearthed our treasure chest, brought forth our class data, and spent the remaining hours of the evening and the remaining dollars in our treasury, discussing previous good times and future plans over a chicken dinner served at Flanagan's in Greenwich Village.

Summer wore on and we saw little of each other until October 4; then the depleted ranks of the Class assembled at roll call to do justice to the fourth year of their struggle for knowledge.

Little time was spent in idle dressing, as the Class immediately buckled down to business and held their first meeting on the third Thursday of October. After the election of officers and other routine business had been completed, plans for the year were enthusiastically discussed. An entertainment committee was appointed in condee with the other Junior classes for the purpose of furnishing a joint committee to arrange THE affair of the year—"The Junior Prom." The committee was formed with Leslie Hirschel as chairman.

It was also decided to have a member of the Class present a paper on a subject of general interest to all, at each of the meetings. Subsequently two were presented at Class meetings, one on "High Tension Protective Devices," by Mr. Helding, and the other on "Storage Batteries," by Mr. Guida. Both proved interesting and instructive.

It is with a feeling of pride that we look back on the happenings of the past year; a feeling of satisfaction obtained only in contemplation of a job well done.

True to form the Class was 100 per cent. for the Pioneer and Canteen. Strongly represented in every undertaking the Class had attained an enviable reputation in school activities. Wm. Brown, representing the Class on the Canteen Board, was elected Editor-in-Chief, while Fred Kuch was elected the Business Manager, and Albert Helding was appointed the Athletics Editor.

The Varsity "C" has been awarded to Helding, DeAngelis and Cleary for their continued good showing on the athletic teams.

Joseph Muller was presented with the prize given by the committee on Standardization of the Graduation Emblem, for designing the key chosen by the popular vote of all the students of the school.

Our good work will go on, but this history cannot, so we resign until the next Canteen.

THE HISTORIAN.

General Science, Class of 1925

Officers

WILLIAM J. HARBERS.....	President
FRANK LAMIA.....	Vice-President
SEBASTIAN MUSSETTI.....	Treasurer
PETER MANZARI.....	Secretary

C. U. S. L. Delegates

SIDNEY OCHS	F. LAMIA
NATHAN LUDWIG	SEBASTIAN MUSSETTI

THE G. S. Class of '25 can well boast that its members are consistent workers. It was with the greatest of pleasure that we noted the survival of many, through the terror of last year's exams.

There was considerable delay in getting the social work of the year under way, but once started, many things were accomplished. A Class banner was acquired in the latter part of the term. As a result of selecting an active entertainment committee we were able, along with the other classes of '25, to make our debut at the Junior Prom, staged at the Hotel St. Regis on the night of February 9th. This affair, considering the many difficulties which were met, was a great success, in so far as it helped to promote friendship among members of the classes of 1925.

Among the chief participants in school activities were "Seb," Musetti, captain and fancy diver of the swimming team; "Nat" Ludwig, captain of the Varsity basketball team; "Matty" Russo, of the Varsity basketball team, and Charlie Freshon, manager of the Varsity football team.

On the CABLE board we have W. J. Harbers, as consulting editor, and "Sid" Ochs, as circulation manager. For the proper distribution of *Pioneers* we have Frank Lamia, as circulation manager, and P. Manzari as class newsboy.

The class entered a team in the interclass basketball tournament, and prospects looked fairly bright for us at the opening of the tournament. The members of the team were: F. Lamia, S. Ochs, M. Sands, P. Manzari and A. Karslak.

As the end of the term draws nigh, the members of the Class look forward to the final exams, and to having a joyous time at the C. U. S. L. annual affair. Then the stage is set for the fifth and final term of our course, after which we can face the world with determination to do credit to our Alma Mater.

THE HISTORIAN.

Architecture, Class of 1925

Officers

JOHN WERDE.....	President
SAMUEL KURTZ.....	Vice-President
WILLIAM CHENNELLO.....	Treasurer
NATHANIEL SUMER.....	Secretary

C. U. S. L. Delegates

SAMUEL KURTZ

NATHANIEL SUMER

IT has been said that knowledge is a comfortable and necessary retreat and shelter for us in old age, and if we do not provide it while young it will give us no shade when we grow old. Little can improve the logic of a statement so brief, so qualifying, as to completely cover the establishment in Cooper Union of the Architectural Class of 1925.

Only yesterday, a personnel, pensive, and burdened with the necessity for decision, traced its steps to the great edifice of learning where character plays such an important rôle. The nucleus of the class was soon chosen and in embryonic stage was equipped with a firm resolve that the utmost attainable accomplishments should be the reward, not solely individualistic, but as much and more to the glory of Cooper Union, which as scholars we represent. Today a mature and formidable class organization is the resultant of that resolve, thanks to the interest so heartily taken by our supervisor and faculty.

Not easily can the pictures be eradicated from our memory. Mr. Miller, in his fine friendly way, guiding, proudly cherishing, guarding, warning. Mr. Alley and Mr. Levy conscientiously and zealously laboring in their endeavor to bring out our very best capabilities in construction; the College atmosphere of freedom and sociability which Mr. Alley so inspired. Mr. Entwistle on the necessity of quick perception and inception in the matter of Plan Reading and Estimating; the need for precision and alertness of which he is such an exemplary exponent, always willing to stop to bring up the stragglers. Who will forget that famous expression, "Men, do you get me?" Mr. Smith in his regal rôle of controller of orders in picturesque Roman or Greek setting with downward pointed thumb, as Nero in his time, at a seeming atrocity, and as responsive to the effect of the erasing shield and rubber during the destruction, as was his fiddling royal highness responsive to the horrors in the burning of Rome. All in all he is a man of men among men.

The class mothers, the "Know a little more club," whose name denotes its work, and membership is required upon contribution. The Club does not limit subjects to Architectural matters but encourages engineering in a constructive sense. "The Fifteen Ball and Pin Club," with a membership of seventeen, whose work along social lines and the development of billiard and bowling as a recreational science, is also maintained. We are developing a team in each department and we shall hold ourselves ready for competition in the very near future for contests with any of the Streams or Sciences. The Sketch Club is still in its infancy.

With these as our Class achievements we wish to express the sentiments we hold regarding open school activities that we have cherished any opportunities afforded us and we will continue to encourage them with our complete support.

THE HISTORIAN.



MAURICE M. BRESLOW

"Bres"

Chemistry

"Maurice" specializes in oratory, debate, literature, athletics and a few other miscellaneous items. His oratory is especially appreciated. He will say something about nothing without any provocation whatsoever. Not being a shrinking violet, he has been known to introduce the capital "I" into a few of his dissertations.

Breslow is also a dance hound, attending them all cleverly disguised in a Tuxedo. We hope some day to see him bring a girl to the dance—something which he has not yet tried.

Nevertheless, Maurice is one of the most school-spirited men in the class, and though he talks, he doesn't stop there; he does things.

ROBERT BUDRICK

"Buddy"

ΩΔΦ

Chemistry

From his picture you might deduce that "Buddy" is a "pug," and yet when one talks with him his perfumed handkerchief and refined manner would undoubtedly impress one that he is a "scale hopper." The fact is, you are gazing at a young scientist—a scientist with unscientific ambitions, i. e., a chemist.

As a chemist he passes from one compound to another and is especially efficient in this when alcohol is a constituent. However, this is not the only passing he does, for he has displayed this ability at basketball, but he cannot pass the statue in the Hall without caressing its fair features. Yes, girls, he is a real case.

"Buddy" was the captain of the 1933 baseball team and is Associate Editor on the *Campus* staff. His school activities take up so much of his time that he seldom gives the prof. the correct answer, at least on any his classmates.



ISRAEL FASS

"Fass"

Chemistry

Still water runs deep and Fass is no exception. He does not drink, smoke, chew or dance, and we are sure that he would make a model husband for any girl. Sort of an answer to a maiden's prayer. He aspires to dance and believes in order to trip fantastically one must not take both feet off the floor at the same time. Fass juggles liquid fire like an expert magician and then passes it on to others without apparent danger. Hot stuff this.

LOUIS J. FIDELGOLTZ

"Fido"

Chemistry

This elongated stretch of humor whittens graces the same lab we tread. We envy him—he is too much of a skyscraper to put anything over on. He is the father of the class as we all have to look up to him. Without exaggeration, "Fido" bought a bag of peanuts for a girl on the twenty-third floor of the Woodward Building, and handed it to her from the street. After this news reached the basketball coach, he was invited to jump center. On the gridiron he shone like Edison's star, but he could never run a great distance, as small dark objects would entangle his feet, dropping him to the earth. This proves that the bigger they are the longer they fall.



JACOB FREILICH

"Freilich"

Chemistry

Nature was cruel to Freilich; she short changed him as he only weighs 4 feet 2 inches, but this determined chap has overcome all these handicaps and has won for himself a niche in the hall of fame. He is the other half of the "right shift." It is rumored that he takes Herzberg home after their late parties and makes due apologies to the latter's wife. He tried it on a Saturday night, but Mrs. Herzberg remembered that there wasn't any school on Saturday night. Nuff said.

Like Herzberg he plays (?) basketball. He is committed fools, typographical errors—he commits more fools than any known player. Probably not a favorite with the referees.

LOUIS HERZBERG

"Louie"

Chemistry

Louie is one of our recent benefactors. He valued one of those things, thought he looked like a man and done the wrong. He is one of the members of the "right shift" and we would like to know how he gets away with it. What excuse does he give his "stomach and strife?"

As a basketball player Louie makes a good chemist. If practice accomplishes anything, Louie ought to make the Varsity to delight his grandchildren. The first hundred baskets are the hardest.



ALBERT HILBERT

"Al"

ΩΣΦ

Chemistry

"Al" is a roomster. He supports the Erie and thinks that Clifton (a small burg in the wilds of Jersey) is the cream's delight. We already have two benefactors and we have our suspicions in respect to "Al." It seems strange that a fellow should carry a box of candy, a pound of coffee and various other household articles on different nights.

"Al" is near-sighted, more so when looking for chemicals. On one occasion the prof. found the chemical he was looking for and told him to develop a keen sense of observation. A week later "Al" bought a pair of specs.

His driver was in a smash up recently, but what else can you expect from a one-hand driver.



COURTNEY MOOREHOUSE

"Courtney"

Chemistry

Our first benefactor, too bad, and he was such a nice chap. But better days are coming by and by. The class has on several occasions paid Mr. and Mrs. Moorehouse a visit, indulged in poker games, and as usual the host was able to pay next month's rent. The boys got wise. Wonder what Courtney's present source of revenue is.

He is a quiet unassuming chap; about the only time we hear from him is when his lab. partner and he disagree on the mental capacity of each other. We think Courtney does most of the brain work by the sound of his argument. But the firm of Moorehouse and Hilbert is impossible; they have no equals—especially when it comes to soups. Hot soup!

The JUNIORS



ERNEST SCHELLER

"Ernie"

Chemistry

This young man, whose likeness you see above, is one of "the" select of our class. Girls, he is a ramp if there ever was one. His name and address you will find in the Roster at the back of this book.

At the last prom, Ernie sported one of those suits that the Rockefellers and Morgans wear, and that ain't all; he was accompanied by one of the cutest little girls that tripped the light fantastic at any prom. He is a chemist, he admits it, and after each lecture he whispers something into the Prof's ear. According to consensus of opinion, he is a bootlegger.

WILLIAM SCHULZ

"Bill"

1136

Chemistry

It is with muddy shoes that this chap tramps into school, but that cannot be helped as Bill hails from North Bergen, a wilderness of Jersey. Bill helps "Barrett" manufacture dyes and it is not infrequently that he advertises their products by appearing in class with colorful optics.

Bill claims it is football, a game at which he is quite adept. (Didn't know that they used feet at such affairs.) When it comes to the fair sex, Bill is impenetrable, but he would give anything to be Gloria Swanson's coffee so he could spoon with her.



FRANK SPITALERI

"Spit"

ΩΔΦ

Chemistry

"Spit" has three great claims to fame. One is his "Golds"—of which, if we may believe him, he has more than Mohammed V left behind.

The second is his ability to eat spaghetti at Joe's with greater dexterity than any of the "gang." One will admit that he possesses great skill and technique, seldom allowing a single strand to elude him, and that the medals that have been awarded him have been well deserved.

The last, but not least, of "Spit's" accomplishments is his ability to tell parlor stories. These are fit for any parlor—pool, toothblack or shaving.

ERNEST WERLE

"Doc"

ΩΔΦ

Chemistry

Werle is a Jersey product. His home town, by luck, is none other than North Bergen, N. J. He indulges in all the usual sports and is champion player of parlor games. A peculiar handshake is one of his many inventions. It takes longer than the ordinary handshake to perform, absolutely meaningless, but if anyone would like to waste some time this is one of the most harmless methods.

Werle is quite a structuralist of hydrocarbons, especially with an organic compound like adipic acid. Eh? What?



SIDNEY ARNOLD

"Sid"

Institute of Technology—Ch.E.

"Sid" is an enigma. He comes from Brooklyn, one of the worst parts (if there can be any degree of "worstness" where Brooklyn is concerned), and yet does not seem to know enough to be ashamed of it. This is the more surprising as in other respects he is quite intelligent—for a man from Flatbush. But we are too big to hold the accident of a person's birth-place and residence against him—and besides "Sid" is doing his best to live it down. He captain'd the track team last year, and was an important factor in its work this year. Ah if only—

HECTOR AUDINO

"Etoir"

Institute of Technology—Ch.E.

When we first met Audino we tabulated to him as a raving Bolshewiki, but later learned that he merely liked to disagree. He is forever flourishing a pencil or piece of chalk and trying to convince us that he is right on some subject for which we don't give a hang.

Audino's obstinate traits have gotten him into many uncomfortable situations, but his solid virtues have always extricated him, and finally brought him to the esteemed position he now holds—in spite of his lip adornment.

"Etoir" has decided, and usually opposing, views on every subject in the curriculum. Having failed to convince all the faculty during his term as undergraduate, he faultily anticipates revising all the text-books, to conform to facts—as he sees them. The terrible thing is, that he is so often right.



JACOB BOORSTEIN

"Jack"

*Institute of Technology—Ch.E.**"Still water runs deep"*

"Jack" used to be a very quiet boy. No one but the Professors knew he was around, "but that was enough," says he. However, the Junior year marked a turning point in his life for it was then that "Jack" stepped out into the limelight.

As Literary Editor of the *Pioneer* he never allowed any mistakes to creep by—the reason he never did any work on the paper. But we must remember "Jack" was a busy man. Besides being active in his class and a guiding star of the Cooper Chem. Club, "Jack" was the Day Tech. Editor of the *Campus*, which job he certainly put across in fine shape. Remember how he used to round us all up to have our pictures taken and then the camera man never showed up—Oh! boy.

It is rumored also that "Jack" is some cook, though to be frank with you we had much rather rely upon his calculus.

FREDERICK G. BUHRENDORF

"Fred"

STP

Institute of Technology—M. E.

Fred came to us, a child, and we suspect, wearing his first pair of long trousers. Two a child in years, he surprised us all by his wonderful knowledge of mathematics. To him went the first "slip stick" awarded by the Mathematics Club, of which, by the way, he is now president. The second year found Fred smiling and still active, socially as well as scholastically. This year he has in addition come out for school activities with the result that he is now secretary of the A. A., vice-president of the Students' Council, and, as previously mentioned, president of the Mathematics Club. What else can mere men hope to attain. To what heights he will soar next year is a question, but no matter how, when or where, Fred, we're with you. Good Luck.



EDWARD CARBONE

"Ed."

ΣΤΥ

Institute of Technology—M. E.

Three years ago a squirming, inquisitive piece of humanity shied its mother's arms, abandoned its perambulator and wandered into Coe's Caper. That squirming thing is still with us and "Ed." is it. One of the most physically active men in the Day School, "Ed." travels about a good deal, but since "shank's mare" is his sole means of transportation he wears off the bottom of his pedal extremities faster than Dame Nature causes them to grow. Hence "Ed.'s" shortness.

"Ed." hits upon many brilliant ideas, but he hits them with such a whack that they break into smithereens.

LOUIS V. EBERT, Jr.

"Louis"

ΣΣΚ

Institute of Technology—Ch.E.

Ebert came from the Night School with a rep—and lived up to it (we refuse to discuss the nature of the rep). He attained the position of Editor-in-Chief of the *Pioneer* in one meteoric leap. But was he satisfied? Well, hardly. "Caesar was ambitious." And Ebert! He decided to assist the faculty in running the school, and as a beginning suggested the revision of one of the textbooks. The suggestion was not taken kindly, strange to say. Future generations of Cooperites will undoubtedly look back on that moment as one which might have given birth to a new learning. But the faculty are a queer lot.



BARNETT C. EMMERICH
 "Barney" YTP
Institute of Technology—C. E.

"Barney" is that remarkable chap in the Civil section of '25, whose aim it is to keep his companions in the straight and narrow path. Indeed, that is quite an undertaking for such a young fellow.

Young? Yes, even juvenile. He can be seen daily in his cute pantalons, sporting his athletically inclined calves. In spite of his youth, Clarence is quite a star among the ladies. It has been learned from reliable sources that our little boy made a hit with a little girl—a red-headed one in fact. Our caution is "Now, Clarence, don't be waff."

Our own "Barney" has his troubles with his "Spark plugs," too, for, be it known, he is an outstanding figure in our bunch of track walkers, and besides collecting several awards at the field days, also grafts a free trip to Philly to chase himself—and a flock of others—around a track before many admiring (?) spectators. It is rumored that his remarkable proficiency in this line of athletics is due to the practice obtained in his various and sundry efforts to board the departing L. I. trains to the wild and barbarous section of the country known to a few people—who are unfortunate enough to live there—at College Point.



JOSEPH FEUCHTER
 "Joe"

Institute of Technology—M. E.

As we enter the Cooper Union Supply Store we are met by a mass of gorgeously colored silk. If we finally manage with a Herculean effort to raise our head and to tear our eyes from this masterpiece of the haberdasher's art we behold the classic features of our beloved Joe. Since he carries his acquired knowledge conveniently in his coat pocket, his head is reserved for hopes of bowling as well as he plays baseball—all strikers.



MATHEW GLUCK

"Mat"

Institute of Technology—M. E.

This young man is a most significant point on the scholastic curve; taking the derivative of the equation of that curve would undoubtedly show "Mat" to be a maximum point—for he is "maximum" in most of the things he does. Besides leading the class in most of the studies he finds time to ably fulfill the duties of President and also hold up his end on the basketball field.

In addition to being so far "up" in his studies he is an authority on many extra-curriculum topics, such as knowing the weight of a shovel of coal, how much a wheelbarrow holds, and kindred facts that are undoubtedly the result of diligent application and much research.

THOMAS GUERIN

"Tommy" "The Infidel" STP

Institute of Technology—E. E.

Early in the fall of 1921 a wriggling, squirming infant was mailed to Cooper Union, who under the careful and understanding eyes of Professors Byers and Pritchard, developed into the yet wringing and squirming elongated infant listed in our annals as "Tommy."

"Tommy" is a radio fan. He has all the symptoms that accompany such an affliction, but he still claims he has never seen Central Jolly. "Tommy" does go to Middletown, though.

"Tommy" is also an author and an acrobat. His non-de-plume is surely famous—Lefax. Under this pen name he has written many of Cooper's textbooks.

His athletic ability is attested by his demonstrations of "Beams." The best of this series is the "Simple" which "Tommy" portrays very uniquely without effort.

The JUNIORS



PETER KOSTING

"Pete"

ΣΑΠ

Institute of Technology—Ch.E.

"Pete's" truly sterling qualities allow no play for facetious remarks. He should be able to trace his Scottish ancestry back to Bruce for he is just as determined and gets what he goes after, even the calculus problems "eventually."

Some one suggested that if we had to fall back to characteristics for names, his by unanimous consent would be "Systematic." He is just that, and as thorough as he is systematic.

He led the Mathematics Club last year, is guiding the Chemical Club this year, next year—Cooper, and after that—the world. "Pete"—go to it.

GEORGE LAMBROS

"George"

Institute of Technology—Ch.E.

George is only one-half pint in size, but makes up for it in grey matter, and has quiet dignity enough for a dozen. George has never been known to lose his temper in all the years with their trials and tribulations. He must be saving it all for one grand outburst—or is it possible that he has none?

The JUNIORS



GEORGE LEWIN

"George"

Institute of Technology—E. E.

For radio news see George. His talks on detectors, neodynes, heterodynes and even negative resistance (on which he is an authority) are well attended by his classmates. George came to school one day, and in a very excited tone told every one about the distance (Newark) he put the night before. His greatest achievement since entering the portals of Cooper Union was the determination of the weight of one gram of coal. This great work was done by George on one of the power plant visits.

Although not an officer holder, George is very active in class affairs.

FRANK LO PINTO

"Piaff"

STP

Institute of Technology—C. E.

"Piaff" is a derivative of the great unwashed, who after thorough education in Cooper was permitted by the Board of Health to move to New Jersey.

In 1922 and 1923 "Piaff" was president of the Civics and Geology Bowling Club. By continual consultations with Professors Byers and Pritchard, and many visits to the directors' office he has finally succeeded in having this society accepted as a standard course.

"Piaff" at the foot of anything in the Pioneer means something worth while reading.



ALBERT E. MAIBAUER

"The Kid" ΣΑΠ
Institute of Technology—Ch.E.

From that fair land known as Staten Island there has come to Cooper one who has won his way into the hearts of all who are privileged to know him.

Hail to you Maibaum, pride of the Chemical section, and Lindeneville's own. And we do not mind letting it be known that the Kid's presence at Cooper is another reason why we think so highly of the Institute.

Though originally slated to be a ditch digger, he decided before his second month that he'd be a chemist instead, in spite of being advised (by an unknown authority) that anyone who wants to be a chemist is a "15¢—fool!"

He is the living proof that "good goods come in small packages" and the members of his class have found it most wise to say "As usual the Kid's right."

But one thing is puzzling. We do not think that he is afraid of spooks; nor have we heard that the corridors of Cooper are haunted; then why is he so carefully guarded by an escort of two men—each twice his size? And why is he so carefully steered away from the Art School?

WALTER W. MEIERS

"Silver-beels" ΣΤΡ

Institute of Technology

"Silver-beels" isn't really his nickname but if you are curious to know, ask him when a certain Civil isn't around. W. W. has always been an active student, winning a place on the track team for three years and serving as Class Treasurer this year. He also stands high in his studies and offers a marked contrast to the attitude and spirit of the "illustrious studious Juniors." To knock a man is easy, to praise him is hard, so for a climax let us say: "We're glad you are one of us 'W. W.' and may the friendship established at school continue in after life."

The JUNIORS



ALBERT A. MITTAG

"Al," "Mr"

STP

Institute of Technology—C. E.

"Al" is the Shiek of Jersey. Our observing reporter has noticed that "Al" brings an entirely different girl to each social function. We suspect that the same girl will not come with him twice.

"Al" is the author of a famous D. C. experiment. During his researches, he noted that ammeters can be placed directly across the line in order to safeguard the circuit breakers. With this knowledge, he invented a non-recording ammeter which he claims is very economical to use.

With such a productive mind, "Al" is bound to succeed.

D. W. PETERSON

"Pater"

Institute of Technology—C. E.

A score of years ago a bouncing baby boy was ushered into this world in the little village of Belleville, somewhere in the wilds of Jersey. Before Mother Earth had done her daily dozen about the sun, this child of ones had acquired the habit of sleeping during the daytime and staying up at night. Even unto this day has "Pete" kept up this habit, sleeping through his classes—(how about surviving lecture, "Pete"?)—and staying up nights burning the midnight—passion.

"Pater" came to the Institute after a brief sojourn at Rutgers. Oh! no, dear reader, there is no Art School at Rutgers and "Pater" is as temperamental—you know what I mean! As "Pete" would say, without the beauty of the Art School, life around Cooper would be very dull and we heartily agree with him.

Although this is "Pater's" first year at Cooper, he has endeared himself to all his classmates by his pleasing personality and his cheerful character.



THOMAS RAVESE

"Tom"

Institute of Technology—M. E.

Since Ray's entry at Cooper he has been rather quiet, but this cannot be wholly blamed on him, for if due consideration is given his raising grounds—Port Chester—one is compelled to admit that he is rounding into real citizenship rapidly. However, reports from Port Chester have informed us that his knowledge of figures is not limited to analytics but is often displayed at local dances.

Whenever music is the topic of conversation, Tom will always commence a lecture on the fine qualities of a "sex." He has a wonderful ear for listening and might be called our silent mate but he does forsake this listening attitude at times to present some words of wisdom to which his M. E. classmates harken.

Even though the town he hails from was under a severe drought (water) last summer Tom never tires of telling you, when in an infrequent talkative mood, that there is no place like Port Chester.

HERBERT ROEMEILE

"Rum"

Institute of Technology—M. E.

"Rum" is one of those dependable chaps who are the real impetus in every progressive movement. A motion passed at a class meeting does not quite satisfy him,—he tries to see it put into effect.

Since he was bearing up so well under the strain of the duties of the Vice-President, he was made Chairman of the dance committee. With all due respects to the other members of that body it was "Rum's" untiring energy and buoyant spirit that made the dance so successful an affair.

Rumor having been spread that "Rum" is responsible for most of these personals, he intends to take a short vacation immediately after this publication is issued.

THE JUNIORS



LOUIS SACHS

"Doctor"

ÆK

Institute of Technology—Ch.E.

We were not long in discovering that Sachs was of an artistic temperament. He has not permitted us to forget this fact.

Sachs has done much for Cooper by organizing the Cooper Union Jamboree which last year grew worthy of its name and entertained at many of the basketball games.

Sachs is apt to greet almost anyone with a cheery "Hello, Doctor," and is pleased to have the same courtesy (?) extended to him. He is very fond of the fairer sex but we hardly dare betray his confidences. Some day when perseverance and wishing has been rewarded and Sachs is a great Chemist, we will publish his biography with great detail.

WILLIAM SHAPIRO

"Willie"

Institute of Technology—C. E.

Willie is the spicer of the Junior Class. We found this out at the Junior dances. Willie, we were would like to know the hotted hair beauty. His taste is surely in the right place. He is always wearing a big smile and is bubbling over with enthusiasm. He is the only C. E. who doesn't eat at Charlie's, which may explain his jayfulness. Willie is very inquisitive, or in other words, is from Missouri. He questions every theory that is put forth and makes friends (?) with his classmates by drilling them with questions when they are presenting papers. Present indications show that he will be our foremost bridge builder as he now holds the honor of being the champion ditch digger and stake driver.



MISS DOROTHY SNAVER

"Dot"

Institute of Technology—C.A.E.

It must have been a gentle west wind that blew Miss Snaver to Cooper—a breeze favorable to both the infant chemistry course which she joined, and the young lady herself—far otherwise what fate might have been hers in Jersey.

To Miss Snaver's presence is undoubtedly due the fact that Chem. '25 remained almost intact, while in every other class and course, numbers fell by the wayside at every turn. And how many enthusiasts of oratory at class and club meetings were inspired by the hope of a smile of approval! And the pain of how many failures have been alleviated by a sympathetic look? We owe much to the young lady.



FRED VAN DER VOORT

"Clancy"

Institute of Technology—E. E.

"Clancy" hails from Main Street, Rockaway, New Jersey, U. S. A. He is noted for being a narrator of lark jokes and a singer of lark songs. Some of his jokes and songs are of the vintage of '76, but since they have but recently arrived at Rockaway he thinks he is putting something over on us city chaps. All one has to do is find out whether "Clancy" is in school or not is to look down the corridor for traces of Jersey mud. We certainly are glad he doesn't tote along any of those well known mosquitoes. He is a born entertainer. His classmates will testify to this after seeing the artistic act which he put on at the Thanksgiving entertainment.

To be a friend of "Clancy's" means to praise the Erie and understand thoroughly that his Rockaway has no connection with the Rockaway of Long Island. From appearances "Clancy" looks like a regular farmer, but to have seen him tripping the light fantastic at the Junior Dance was all the evidence that was needed to show that they must raise more than horses, cows and chickens (of the feathered variety.) "Clancy" is an enthusiastic amateur radio fan and he sure can wiggle a mean cat's whisker.

During the latter part of his Sophomore year Fred must have lost his razor for he developed honest-to-goodness sideburns. What taste the girls in Rockaway must have!



CARLOS ARAN

"Moses"

Electrical Engineering

Despite the appellation of "Moses," Aran is not a native New Yorker, but hails from Porto Rico. Apparently he doesn't like the climate of New York in winter, nor does he like that of the other extreme after recommended to him as a substitute. When "Moses" entered the Custom House, all he had to declare was—that the weather was cold. But this discussion about climate is far from the point. The important thing to remember is that Porto Rico is a territory of the United States and that "Moses" will be eligible for the presidency as soon as he becomes of age.

Outside of threatening to sue the landlord for more heat, "Moses'" chief topic of conversation is his baby. Due to the many radio sets in the class he has no trouble getting someone to listen to his stories about his little offspring. We all take our hats off to Aran. Coming to Cooper without being able to fully understand or use the English language, he has come thru every year and he-day ranks among the highest in his class. He has always supported the class activities to the best of his ability, and is noted for his good fellowship.

JOHN BATTLE

"John"

Electrical Engineering

In contrast with his name, John is the quietest and most peaceful man in the class. He has never been known to become excited, and no matter how hot one may get in arguing with him, his slow easy drawl and his broad smile never change, and he usually convinces his opponents. His chief idd far fame is his remarkable ability to extract class dues painlessly from his class-mates. In fact, he can collect dues from the tightest man in the class without raising his voice above a whisper. Because of this, his services are much in demand. In this art, "Pop" is one of John's pupils.

John's hobby is rowing, he being an active member of one of the leading New York Canoe Clubs. He has covered many miles in his canoe, but for some strange reason never talks of it. This year will probably see John and Willis in opposing crews at the A. C. A. Atlantic meet. John stands well in his class, is liked by all his class-mates, and will go far in his chosen field.



ALBERT H. BEILER

"Beiler"

Electrical Engineering

"Can water stuff go along an isotherm and line from gas to solid at such a temperature that when it was a gas it would burn and when it was a solid it would freeze." Pray, dear reader, read the foregoing question again and then gaze upon the troubled countenance of the querist. He not surprised to hear that he comes from Brooklyn Polytech, and that his hobbies consist of Mathematics, Nomenclature, Puzzles and Miniature Architecture.

Beiler is out to show what the Brooklyn Poly men know about math, heat and electricity. He works hard and prepares diligently for his semi-weekly discussion with "Pop." Although new in the class the men are all "wise" to Beiler and consider him in the same class with Rodgers.

GUSTAVE H. BIDERMAN

"Gus"

Electrical Engineering

Gus is one of our class mathematicians. He at one time succeeded in getting 100 per cent. in a Calculus exam. Immediately a dispute arose—the question being, was it luck, or was it brains, but after some debate it was left for posterity to settle. To-day none can deny his ability in the knots with Differential Equations.

Gus has one fault—he travels from a country known as Elmhurst (adv.), Ill., of course, provides the necessary excuse for membership in the "9:30 Rush Brigade."

Gus' prize possession is his iron hat, probably because it is the only one ever made that is large enough to fit his noble dome. It has been his constant source of pride from his Freshman year, and will undoubtedly be displayed by him at his Graduation.



THOMAS BROWN

"Tom"

Electrical Engineering

Tom is a steady sort of chap, having been out of work only once in several years. The reason is that he tried to experiment with an electric fan. He discovered that if you offer it a finger, it tries to take the whole hand. We hope he lands a job soon, or he won't have any more prestige when he graduates than a day school man. Tom is a willing worker in all the student activities. He handles the tickets to the athletic games, attends most of the C. U. S. L. meetings and has helped with the Cante. Tom's chief hobby is dancing with "little girls" and will always be found at our hops with a different one. We often wonder where he gets them all from, but it is rumored that he has been seen scrounging through the wilds of Inebriate Park. Tom has a habit of arriving in class late, attending meetings and getting home late, and handing in reports late. We prefer to remember him as "The Human Train."

WILLIAM H. BRUNS

"Willie"

Electrical Engineering

Until last year it seemed as though Willie had been born under a lucky star with a silver spoon in his mouth. Suddenly his luck changed and he was made editor-in-chief of the *Cante*. We may liken Willie to a camel in a certain sense. As a camel goes without water, Willie goes without sleep. Some of the boys have been trying to solve the mystery of how Willie manages to get his home work done. The solution is—watch Willie in D.C. lectures.

Willie's favorite hobby is canoeing, and his most prized possession is his "jacket." He enjoys cruising summer and winter, and when the river is frozen he takes to skates. He has staked a claim to a shack somewhere on the Hudson, and he just "don't care for nuthin'."

His bad habit is taxi-ing to school when he is late; money does not worry him, for if he finds he is "flat" he just jumps out of the taxi and runs the rest of the way.

During the past year our Willie has taken to the Terpsichorean art. He maneuvers his partner through the crowd as easily as he pushes his canoe through an ice floe.



JOHN V. CLEARY

"John"

Electrical Engineering

Outside of being the President of his class, John is the ringleader of the "Power House Gang" from "up by them Car Barns." He has the weakness of enticing the younger element of the class into staying out all night with no better purpose than to do homework. As a chemist, John has proved his worth in the laboratory, often performing experiments through his own ingenuity. Science will certainly benefit by his noted experiment wherein he determined the effects on a fellow student when said student was unexpectedly saturated with Ammonium Hydroxide. History will record his remarkable cool and assured attitude upon noting the results.

One of John's ambitions is to be afforded the privilege of seeing certain of our instructors "Okin." Often he has expressed his expert opinion as to their probable ability in that capacity.

John is the mainstay of the pitching staff of the Baseball team and is a letter man. He is also one of the highest in his class studies. We all like John and believe he will become a noted Electrical Engineer.



JOHN J. CONNORS

"Chuck"

Electrical Engineering

"Chuck" is the Bean Brummel of the class. If he studied the text as hard as he studies the "What the men will wear" column of the theatre programs, he would probably be the star pupil. "Chuck" must have his cigarette. No matter how cold, he will dive out of the class (to the street) at the stroke of the 8:40 bell to get his smoke. He does this so regularly that it has given the money collectors of the class the impression that he is trying to "duck" them, an erroneous impression, however, as he is an active supporter of all class activities, even bringing something besides a girl to the Junior Prom.

One of his hobbies is chewing gum in the laboratory sessions. He probably does this because of not being able to smoke on those nights. He will make a good Foreman—in fact, he shows considerable promise in that direction in laboratory sessions, some even claiming that they have never caught him working.



ALFRED CRIVY

"Al"

Electrical Engineering

"Al" was asked by the photographer whether he would prefer a handsome looking picture or a likeness of himself. Although they were expert retouchers, they couldn't put hair on Crivy's head, but that was no reason "Al" couldn't put a hat on it. Still, he looks pleasant, but the picture was taken before "Al" was told the price. If a high forehead is an indication of high intellect, Crivy's seems to confirm it. He is a member of the 100 per cent. squad. He and the other members of his laboratory squad took a test. The four marks totaled 100 per cent. If "Al" Crivy and Leslie Hirschel got together they would make a great Katzenjammmer team. "Al" and Leslie are about the same height and are the smallest men in the class.

ANTHONY DANI

"Dani"

Electrical Engineering

Dani hails from the Italian army and the Polytechnic of Turin. It is said that while in the Italian army he distinguished himself as an engineer, and for his services Mussolini has written him several letters asking him to return to Italy and be his right hand bower, but "Tony" prefers stormy Cooper to sunny Italy.

He is married and lives in Jersey. This provides him with the necessary qualifications for membership in the "Fido Rush Brigade," but it is rumored that his father-in-law owns a Rolls Royce, and it is probably imperative that he keep on speaking terms with his better half.

"Tony" is one of our quietest—the only time he will venture to speak to his fellow classmates is when he is entirely disgusted with arguing with the instructor over his report.



CHARLES FAIGLE

"Otto"

Electrical Engineering

"Otto's" chief bid for fame is his ability to comfortably distribute his 220 pounds over two lecture room seats and sleep through an entire lecture. He is seriously thinking of giving up his career as an engineer and returning to his first field of endeavor—holopha smuggling. His ability as a trader is fast being recognized in spite of the threats of those unlucky enough to be within range of his voice. Outside of his sisters, "Otto" believes that most girls are stupid and hence will have nothing to do with them. "Otto" is one of the members of John Cleary's "Power House Gang" and has spent several nights before exams in their den. The noise of the machine drives out his tender solon, and for that reason he gets along very well with the other members of the gang. After all is said and done, "Otto" is always seen on deck when the smoke of the exams clears away and he will probably be just as good an engineer as he was a holopha smuggler.



ANDREW A. GANDOLFI

"Gandi"

Electrical Engineering

"Gandi's" favorite pastime in laboratory sessions is dashing back and forth through the aisles of the lab., with a meter under each arm and a brief case in his hands, trying to capture all the available apparatus and loudly proclaiming his wrath toward his speed meter for their lateness.

Like "Cale," "Gandi" always wears rubbers in the lab., but we believe it is for a better purpose than "Cale's." "Cale's" purpose you will find elsewhere, but "Gandi" wears them to render himself immune from shocks when tracing out the Dutchman's connections.

"Gandi" is active in the class activities, but his tendencies lean toward dinners instead of dances. He is willing to give time to anything and one can depend upon his word.

He ranks high in his studies and we all expect great things from "Gandi."

The JUNIORS



THOMAS J. GUIDA

"Geeda"

Electrical Engineering

The Shells of Corona—gone upon his countenance and notice his corona effect! When he entered Cooper, someone foretold that before he came out he would be a bearded man. How near the prophecy has come true may be judged by observing the partial eclipse of his physiognomy.

We believe that "Geeda" is trying to emulate "Pop," not only because of his blonde adornment, but also because he is one that listens intently to "Pop's" electrical discussions and even has been known to attempt to interrupt the proceedings to express his own opinion. He also, at one time, tried to raise an argument with the Prof. as to the "mechanical features of paper."

"Geeda's" greatest hobby is to get up in a class meeting, or C. U. S. L. meeting, and call all his schoolmates "black-heads," "dumb-bells," etc., and for his ardent efforts he fails to get anything but a "raining."

Wanted: One girl to teach Mr. Guida to dance.

ALBERT G. HEBLING

"Al"

ΩΔΦ

Electrical Engineering

As chief entertainer of the "boys in the back-room," "Al" most likely will be named for a few failures in Mechanical Drawing. To save himself from certain doom, "Chuck" Connors was forced to leave the back-room and finish the rest of the term beyond the range of "Al's" jokes. In fact, no laboratory or drawing night is complete without a story from "Al"; some of the stories are good, some bad and some are in foreign languages. If we don't laugh at a story, "Al" apologizes and then tells another one.

"Al" is the athletic editor on the Comet staff. He also has proved his worth on the football team and is a letter man. He attends all the social functions, sometimes with a girl, and sometimes alone, but invariably with something on his hip; for the latter, he is very popular with the Faculty. The least of "Al's" concern is his studies; despite this he ranks high in them. He was the first to present a "paper" at our class meetings, and will probably present more of them before he leaves the folds of Cooper.



THEODORE A. HELLMAN

"Hell"

Electrical Engineering

"Hell" has the unique method of getting half way over the Brooklyn Bridge by 9:33 P.M. How he does it was somewhat of a mystery until the class detective was ordered to trail him home. The detective reported that the feat was not at all impossible, but could be accomplished by anyone who could walk like "Hell."

"Hell" threatens to shock us some day, not by electrical power, but by attending one of our affairs; we trust the ordeal will not prove fatal.

Due to his reticence, "Hell" is unknown to the majority of us, but we hope to become acquainted with him before the end of this semester.

LUDWIG E. HERBORN

"Lud"

Electrical Engineering

"Lud" is one of the few men in the class who sleep as well at Cooper as they do at home. However, he is not afraid of work—no matter how much work is being done he will sleep right through it all. He and Hellman have not been on speaking terms ever since "Hell" tried to impersonate a ton of falling bricks, thereby interrupting Herb's beauty nap. "Lud" delights in finishing six plates of Mechanical Drawing in one night, probably the reason for this is the fact that the stools there have no backs and are less comfortable than the seats in the lecture room.

Herby is noted for carrying his notebook to school, losing his rubbers and hunting his truant brief case. His only topic of conversation is radio.



LESLIE HIRSCHTEL

"Les"

Electrical Engineering

At about the time "Les" had his picture taken he was conducting an experiment with facial foliage a la "Gorda"; this is a noted stunt of "Les's," when he is about to change his position. It at least makes him look like a man. Leslie studies hard and diligently on Saturday nights. The intensity of thought may be gathered from such remarks as "I'll take three," "Raise it two," etc.

"Children should be seen and not heard" does not apply to "Les," at least he does not think so, for although the lower portion of the "Morse and Les" team he is by far the noisier; in fact, the only noise.

Class activities? That's "Les's," successful or otherwise he is there and he probably does the least worrying of them all.

After a year's association with his squad mate "Beiler," "Les" is beginning to see that they are trying to teach him something at Cooper. He is now spending considerable time studying and reading to keep up with his squad, otherwise he is still the same "Les."



CHARLES IMBURGIA

"Charlie"

Electrical Engineering

Charlie is the long distance class secretary, having been elected to that extremely important position for three consecutive years by unanimous vote. Due to all the practice he has had reading previous minutes, Charlie is developing into an elocutionist. Charlie claims that he is always up till 1:00 and 2:00 A.M. studying, but he comes into class clean shaven quite often,—perhaps there is another reason for these midnight sessions. We think he neglected his "Main Study" during the Christmas holidays, for besides "Beiler" and "Pop" he was the only man in the class to do an appreciable amount of homework. Charlie is also our A. I. E. E. delegate and he has been known to spend some of his time at C. U. S. I. meetings. In addition to being an "active" member of the class, he is a top-notch in the studies. Such a combination surely will mean success to him.



FREDERICK C. KUCH

"Freddie"

Electrical Engineering

"Keep your head down, Freddie boy." Although Freddie is our little "Charmian boy" on the Dutch squad, he evidently has never heard this famous song. How the photographer succeeded in getting Freddie to lower his chin is still a mystery, but the theory has been advanced that the camera was hidden in the ceiling. Maybe, who can tell.

In addition to being Business Manager of the Camo, Freddie is a chronic critic. In fact, regardless of what his official capacity may be, his assumed position is that of censor, but anyhow he firmly believes that all his criticisms are constructive.

What is it that he fears? Not the instructor, for he will get up in quia and write as boldly as you please whether he knows what he is talking about or not; not the exams, for if he doesn't beat them now, he will in the Fall; not the financial condition of the Camo, for apparently it is none of his business. No, dear reader, he fears none other but the Dutchman; Freddie trembles at his word, obeys his commands, even apologizes for his mistakes and laughs at his jokes. What strange coercive power this is is still a mystery that has baffled such men as Freud, Steinmetz and Brill.

ERNEST H. LINKE

"Ernie"

Electrical Engineering

Mr. Linke hails from the "naptha" state, but this does not explain why he is a charter member of the "Nise-thirty Home Business Association." Yes, you've guessed it, but there is not only one woman in the case, there are two; Mrs. E. H. Linke and Miss Linke, but then you can't blame him for being a runner; we'd all do the same thing if we were in his shoes.

"Ernie" excels in D.C. Machinery and occasionally awakens half the class with his hoarse voice when expressing his thoughts in the quia. It is rumored that he will teach D.C., but perhaps he will forego this line of endeavor and accept Steinmetz's old position with the G. E. Company. Meanwhile he is spending most of his time and energy remonstrating with the rest of his squad for their dilatory methods.



RAYMOND MULLEE

"Mullee"

Electrical Engineering

Our class comedian. Wherever Mullee goes one will hear laughter. His pet hobby is to invent unique and humorous stories about his innocent classmates and instructors, and then recite them to the ever believing student body. Mullee's favorite was to carry on a red pencil weekly conversation with his lab instructor in the pages of an old report book. His fellow students would read his impertinent answers to the instructor's supposed corrections and then more amused than amused, would snicker at his audacity. As a comedian he did not come into the limelight until it was well known that he had succeeded in making Rodgers express his mirth by laughter, eye-brows, and laughter, a feat generally considered to be well nigh impossible.

Ray is one of the "Medal Grabbing Mullee Bros.," and is known to be feet of foot. If it were not for him the E. E. Class of '25 would be unknown on Field Day and on the Track Team. At present Mullee is recuperating from an illness, and some concern is being registered among his class mates as to the status of E. E. '25's athletic reputation this spring.

JOSEPH MULLER

"Joe"

Electrical Engineering

An Artist he was going to be,
So he studied electricity.

Joe came to Cooper as an artist but they convinced him that he would make a better engineer. Some of his artistic temperament still clung to him and during the course of last year he designed a pin. Yielding to the clamor of popular student opinion he was induced to allow it to be used by all succeeding graduates. According to Joe the lamp on the upper part of the key signifies the students burning "the midnight oil" (not gasoline), but according to "Mullee" the only thing that suggests midnight about it is the fact that the appearance of the emblem is best appreciated at that hour. Joe is quite a versatile fellow, having made several attempts on field days. Were it not for his competitors he surely would have brought home the bacon. Joe attends all the C. U. S. I. meetings and is personally interested in every argument pertaining to school activities.



ALBERT PHILLIPS
"Cale"

Electrical Engineering

"Cale" is our latest. He always wears rubbers to keep his feet from making a noise as he scuffles them across the floor, but, alas, one night in the Elec. Lab. they proved his undoing. He had completed an experiment with a can of boiling oil and was carrying the can full of oil back to its appointed shelf, when he accidentally spilt some of the oil in front of him. Ordinarily, spilt oil is nothing to cry over, but when one is wearing rubbers, they shouldn't step in it, as "Cale" did. He had to carefully crawl through the oil to a dry spot to keep from falling again.

"Cale" is noted for his high forehead and it is feared that in a few years he will be "Al" Crary's rival. Outside of bathing in oil "Cale's" hobby is smuggling sample paving blocks and iron girders from Room 22-H into his fellow classmates' brief cases. He believes that the little acts of kindness count in life, no matter how monotonous it may seem to his loved beneficiaries.



CLARK POOL, Sr.
"Pop"

Electrical Engineering

"Pop" is our Treasurer and under the careful tutelage of John Battle he will probably be very efficient before the end of his term of office. He hails from the University of Nebraska and it is said that he developed the first radio set west of the Mississippi. "Pop" has a 23-year-old son in the E. E. Class of '27 and also a charming daughter in the School of Art. He is an ardent supporter of the school activities.

No class discussion is complete without "Pop's" opinion, but one seldom knows when to expect it. One thing is certain, it will come forth when it will, regardless of who or how many may be speaking at the same time. Most of our electrical lectures consist merely of a heated discussion between "Pop," Hieler, and the Prof. over various parts of the text. For this same of us are very thankful to "Pop" as it gives us a chance to write our laboratory reports. The few classmates who listen to the arguments say that "Pop" is the Champ. This must be true, for his voice is heard above all the rest, and if one has the time to spare from writing reports to look at him, the quick vibrations of "Pop's" "outstanding" feature—his snuff-strainer—is the first to attract one's attention.



JAMES RODGERS

"Rodgers"

Electrical Engineering

Jim entered Cooper with one idea in mind: to show up the rest of his class. He tried to bunk a few backward students in the Electrical Measurements Laboratory by raising the class average to a prohibitive altitude.

He is especially popular on account of his zealous support of all class activities.

Jim will stop work to listen to "Muller's" jokes, and though most of us have never seen him laugh, "Muller" claims that he smiles at some of them. "Muller" probably is exaggerating a bit to uphold his reputation. Rodgers has obtained nothing from the course, having frittered away all of his time studying.



WILLIAM ROSENSTEIN

"Rosenstein"

Electrical Engineering

Ah! that's he, the boy who is fast eclipsing the rest of the class in Differential Equations and Machine Design, whose intellectual questions have caused consternation in the camp of the Faculty. Certain of the Profs have shown considerable evidence of nervous strain when he was in an inquisitive mood. Some even believe he will out-Edison Edison with his questionnaires. Perhaps Rosenstein may be compiling data for an Encyclopedia, but we prefer to remember him as the human interrogation mark.

Rosenstein is also one of our shesha and claims to have dangled many a sheba on the end of the much-talked-of string. Ye gods, what taste the girls must have, but still there is no denying that love is blind.



ISADORE SWIRE

"Swire"

Electrical Engineering

Swire is one of the few men of the class who mind their own business, and consequently he is only known as a "fellow student." Like Willie he has a mania for haircuts and comes to class every night with a different type. He is also a snappy dresser and is most likely the cause of many a broken heart.

One of Swire's habits is to fall asleep in the lecture room, which is not an uncommon one, but one should at least stay awake while the instructor is re-educating with one for falling asleep.

Although Swire is not as active as could be wished it is entirely due to the poor company he has chosen. In his behalf, however, it can be said that he takes all the knocks and boasts of some of his humorously inclined classmates good naturedly and harbors ill feelings toward no one.

HENRY WALTHER

"Walter"—"The Dutchman"

Electrical Engineering

Walter's main alibi is that he is a married man. He is wont to use it in explaining to his squad mates why his report is three weeks late. He hates to be corrected in public, especially in the laboratory, and if anyone ventures to correct him, he gets flustered and blushes and actually stops thinking. From then on, whatever he does or says is without thought—for example: When asked by the instructor the reason for his absence from the previous session, he blushed and answered that he "didn't feel so bad." Walter is known as the "boss of the Dutch Squad." The other Dutchmen in his squad meekly obey his orders and take the "howling out" he hands them when he finds a mistake—Yes?



MAURICE ZIMMERMAN
"Zimmie" AMΣ
Electrical Engineering

"Zimmie" is our class "Big Boy." His nose evidently knows that little poem which starts "I have a little shadow." This shadow persists in avoiding between "Zimmie's" upper lip and his nose, but then, too, it may cover a multitude of sins.

Lately "Zimmie" has been growing thinner. Some say that he has crossed everything off his menu but differential equations, but this should be sufficient, for he sure does devour them. Although Physical Training does not appear on any program at Cooper, "Zimmie" indulges every Tuesday and Friday evening. He holds the record for the 100-yard dash across the lab, to any point of absolute safety. His race is unscheduled, taking place any time one of his team mates is ready to throw a switch.

One of his jealously guarded secrets is that he is E. E. M's C. U. S. L. delegate. His position there is made more conspicuous by his absence.

In spite of these foregoing facts, he is a good fellow and the senior partner of the team of "More and Less."

ROBERT DeMONTE
"DeMonte"

General Science

Ah, here we have a personage about whom we might make as bold as to say "He knows calculus." I remember, I remember in the golden days of yore, how DeMonte used to stagger us with integrating him.

However, in spite of this one blot on his resumé DeMonte is A1. It seems to us though that he would present a more pleasing personality if he could manage to get hold of a large size cake of soap and wash that black speck off his upper lip. Speaking of appendages, we wish to say that we think that a coal miner would find it hard to grow ("Bring up" if you please) such a black one. Ain't it a darling, girls?

The JUNIORS



CHARLES FRUEHAN

"Charlie"

General Science

Charlie, who guided the destinies of the football team so successfully last season is another one of those modest fellows who are quiet to a fault. So quiet and silent is he that some of the profs just naturally give him a zero. His tireless efforts in connection with anything he undertakes always bring results, but his efforts in class do not always bring the same.

GEORGE FREUND

"George"

General Science

George is Mr. Williams' right-hand man when that instructor has his right hand in bandages. He's so bright we are led to believe he uses Sapolin for washing. George is a shining example of what can be done when one is compelled to study while going to and fro in the tubes of Newark. His advice is that if you wish to become a great man like Napoleon or Jacob Ruppert, for instance, study while riding in the tubes.



WILLIAM J. HARBERS

"Bill"

General Science

If our suspicions concerning this young man proved for anything we expect "Bill" to become a benedict soon. His dashes for home after school speak for themselves. "Bill" has a single track mind and puts lots of steam on it. Discard is his pet hobby and we think that he earned his vacation, i.e., law. He may be correctly dubbed an expert on hallucinations.

Judging from his expressions in class "Bill" can wink more often than any other student, probably due to the adornment of a monocle at the Junior Prom.

"Bill" Harbers is the president of his class and an Associate Editor on the *Cama* staff.



HARRY HIXON

"Hixon"

AMΣ

General Science

As a sterling example of what a terrible oil-can a person can grow up to be, we have but to refer to our learned colleague—Mr. Harry Hixon. Mr. Hixon is a man of few words but when he does give utterance to a sentence or two the rest of us listen with amazement (we don't know any better) at the words of wisdom that flow from his mouth like the dew that falls softly on the evening grass (although we are not quite sure what color "evening" denotes).

Hixon in the past has been a great track warrior, also having engaged in various strenuous activities such as tiddidy-winks, ping-pong, etc.

In the end, however, after summing up all the little (d)s we find that the consensus of opinion among his fellow students is that a nobler heart never beat beneath a tuxedo.



JOE HERKOWITZ

"Joe"

AMΣ

General Science

Joe is known as "Kid break their hearts" alias "The bughouse fabic champ." What connection these two titles have can only be arrived at by an exhaustive treatise on relativity and permanent waves. We think Joe will make a good civil engineer as we are led to believe he stays up quite late studying (the dances at the Alhambra).

HARRY KESSLER

"Kessler"

General Science

The smiling shock. The only fault we have to find with Kessler is that his face was not made large enough to accommodate the smile he was endowed with.

Kessler has been active in selling copies of the *Pioneer* to his classmates, and as far as salesmanship is concerned he is par excellence. The dimes just jump from his victim's pockets.

The JUNIORS



WILLIAM W. KOPECK

"Kopeck"

General Science

When the Knickerbocker Ice Co. made the G. S. '23 organization's Sergeant-at-Arms their Asst. Chief Engineer, he came to Cooper to show the faculty how to run things. Mr. Kopeck is happily married but thoroughly enjoys every hour of his freedom at school. At present he is holding down nothing less than a job as Chief Engineer of a large hotel in New York.

Kopeck readily buys tickets for all the school games although he does not manage to use them and we are glad to say that in this six-footer we have a staunch financial supporter of all our school activities.



FRANK LAMIA

"Frank"

General Science

In past years Frank has been noted for the unusual ability he possesses of parting his classmates from their hard-earned loose change. During this year, however, he has become notorious, for this profession we would like you to know is the esteemed vice-president of our class organization, and besides filling this official capacity, served on the Prom. Committee.

Frank is one of those chaps who take an interest in any group activity. Basketball is perhaps his favorite one.



WILLIAM LANG

"Bill"

AZK

General Science

Water, water everywhere but not enough for "Bill." When it comes to swimming "Bill" wins the brass plated medal. He can plow through a poor defenseless pool like a champ, and does he dive; I'll say he does.

It seems where legs are the important factor, "Bill" wins in a walk. You should see him dance. Oh mamma! He sure does wiggle a wicked toe. And when it comes to style. Say, did you ever notice that bow-tie behind which he hides?

FRANK A. LEHMANN

"Frank"

General Science

An excellent example of collegiate manhood. Hardly ever blushes and most always wears a smile as big as the Leaning Tower. Two years ago Frank didn't know the difference between a wavelength and a grid leak. Now it's difficult to hold any sort of conversation with him without having him drift to radio in self-defense.

Frank is one of the bright spots in the class. He will tell you the latest joke without the slightest provocation. He just babbles over with good fellowship and does a whole lot toward enlivening the class spirit.

We hail Frank as a good fellow.

The JUNIORS



NATHAN LEWIS

"Nat"

AME

General Science

If "Nat" would sit down a little more easily there would be more whole chairs in the classroom. The problem we would like to give "Nat" is that of finding the deflection of a seat when he is sitting on it.

To see "Nat" trip the light fantastic at the Junior Prom would have done your heart good.

"Nat" is a young man of slender physique and serious mien. We are inclined to think he "got that way" from pining over the decrease of his beloved writing society, we forget the name of it, it existed so long ago.



ALBERT E. LOBECK

"Lobeck"

General Science

About the only piece of humanity, if we may call him such, that is always prepared for class quizes, exams, etc., that we have ever come across, is Mr. Lobeck. Now that Lobeck has become an instructor in calculus we are glad we are not in his brother instructors' boots. We dislike to think of how Mr. Lobeck will show them in years to come. Not that he is exceptional in this subject only, nay, not so. He excels in all the other subjects as well. We think that he would have been a great help to Sir Isaac if they had worked together.

Lobeck, although unable to find the time to attend the various class and school functions, has always been ready to lend his aid financially.

The JUNIORS



NATHAN LUDWIG

"Luddie"

General Science

We wish all our classmates would share the pep that "Luddie" has. His energy is expended for the most part in football and basketball activities. A better captain of the basketball team would be hard to find. "Luddie" eats and drinks basketball.

As far as engineering is concerned, "Luddie" thinks it is a most wonderful brain developer for those who have nothing better to do with their time.

All other things being agreed upon we think "Luddie" is doing a great work for Cooper, and we sincerely hope he is rewarded for his efforts by having a leather medal bestowed upon him this year.

LUDWIG MACK

"Mack"

General Science

This tall, lank, lean individual has been raised up in athletics as well as other school activities. As a ticket seller Mack used to be a devil but somehow or other he left off this occupation toward the middle of this semester. We think it was because he thought there was not enough school spirit in the class. Well, anyway, we like the color of the F. & A. M. Lodge paper he does his home work on, although we would like to ask that he have the printed matter on it interpreted so we all can enjoy it.



PHILLIP MALLOZI

"Phil"

General Science

From his first days at Cooper, Phil has been trying his utmost to prove that a course in mathematics is more interesting than a golf course. He contends he is all there with the niblick and strings a mean stroke.

Phil's weak point is always asking too many questions, which, though simple in nature, are hard to answer. Perhaps that is the way he gets revenge on the instructors for their calling on him in quizes so much.

PETER MANZARI

"Peter"

General Science

Another man who is doing a great work for Cooper. Most any night in the latter part of each week Peter can be seen industriously making his way through the class selling *Pioneers*. Peter is the able secretary of our class organization and does credit to his office. His musical "Don't forget the meeting, boys," is part and parcel of him. Pete is a valuable man in the political circles of the G. S. class of '25 and we're afraid the whole thing might capitulate if anything should happen to him.



JOE MATOSCHEK

"Joe"

General Science

Joe, we believe, is a member of the personnel of the Combustion Engineering Corps. If he uses as much logic in his arguments in business as he does in Cooper, we think he must be a very valuable man.

Joe, although a member of the C. E. Class, graces the A. S. M. E. rolls, and logically concludes that he will profit by so doing.

LELAND R. McCANN

"Leland"

ΩΩΩ

General Science

Leland is a student who believes that the only way to get a subject is to sit right down and study. Thus he can usually be found engaged in his favorite indoor sport at any time just before class.

When this future engineer first came into our midst (who wished him on as we have never been able to find out) he was leading the simple life. Since then, however, he has taken the vow to honor and obey. Well, good luck old man, you need it.



ALFRED MINERVA

"Al"

General Science

"Al" is the chap who believes in getting 100 per cent. in his exams. He studies and studies and studies and never a word out of him. It's usually the silent chap who gets 100 per cent. in his studies, perhaps.

"Silence is golden" must be "Al's" motto.

JULIUS MINDHEIM

"Mindy"

ΦΚΓ

General Science

"Mindy" entered Cooper some years ago, a modest unassuming young man, also slightly fat. After four years of hard work his sterling character is still unimpaired (except where the brain shows through), but he is—oh my yes—a much thinner man. Most of his missing avoirdupois has been sacrificed on the altar of the god of football while playing left guard, while the rest of it has been lost in trying to tell the difference between a differential and an integral.

"Mindy" is rather quiet, speaking on rare occasions only, hence it behooves one to listen when he does talk. You'll have a good laugh anyway. His favorite diversions are eating and sleeping.

The JUNIORS



GUS MORTENSEN

"Gus"

General Science

"Still water runs deep." Where Gus gets the Chinese puzzles is still a class mystery. We think this promising young civil engineer would give home-run "Babe" Ruth a stiff tangle. He is some home runner himself. Out of the classrooms at the sound of the bell and home in one minute flat.

We do not wish to be personal, Gus, but we hear you would like to join the life class (what—the life class is Sing Sing). Well, go to it, Gus. It is a great life if you don't weaken.

SEBASTIAN MUSETTI

"Musetti"

General Science

The Black Knight, with thunder and lightning, strides through the class meetings of G. S. '24 and with one fell swoop empties the pocketbooks of all the members. Yes, our treasurer is some collector. We feel so confident in his powers that we are planning to send him to Germany to collect for a fund to help destitute and starving Americans.

Musetti's great ambition, however, is to teach the fair sex how to swim.

The JUNIORS



SIDNEY OCHS

"Sid"

General Science

"Sid" is a fellow whose middle name should be argue—that's why he is a U. S. L. delegate. When it comes to arguing "Sid" takes the free pass to the automat. Speaking of automata, "Sid" has been riding in them so long that he looks at this as a worn out shoe and he can't look a nickel in the face without blushing.

Well, "Sid" means well anyway. As a ticket seller he is known throughout the General Science Course to have no equal. When he starts talking you into buying a ticket, even the ticket curls up around the edges in sympathy for you.

JOHN PATERNO

"Paterno"

General Science

Paterno, some years ago, decided he wished to learn more about the mysteries of life, so he arrived at Cooper in due course. Personally, we think his course a bad one, as we have found that once in Cooper we find more mysteries than before, such as mechanics, calculus, etc.

However, we are of the opinion that Paterno is quite capable of penetrating the afore-mentioned mysteries.

The JUNIORS



CHAS. W. RITSCHER

"Charlie"

General Science

When Charlie was a little child he dreamt of becoming an engineer. Now that he is a student in Cooper he dreams of the time when he may become an engineer.

We would like to see Charlie become a more active member of the class next year and perhaps play on our football, or even our ping-pong teams.

M. HOCH

"Roch"

A&K

General Science

When Roch started in school he was among the first of those who thought of organizing the class. In the first year of school he displayed great interest in any project the class started to help the social life of the students of General Science. '25. Since then, however, we are inclined to think he has tired of his activities and retired to the ranks of those who sit and look on. What's the matter, Roch, where's the pep gone to? We miss it.

We know that Roch knows we know he is a good dancer, and he knows he is a good one anyway, but we cannot let this opportunity go by without commending him on the graceful figure he cuts when indulging in the Terpsichorean Art. The way he executes those flank movements of his makes us gasp. What lutesome grace, what poise! Say, what is the homework for tomorrow, Roch?



E. A. SCHROEDER

"Schroeder"

General Science

How do you get your homework done so often, Schroeder? What's the secret?

We think Schroeder's formula for passing the term's work is something like this: do the homework the night after you get it, read up all the articles assigned, including some others, always say yes to the instructor when he wants you to and do as little work as possible.

HAROLD R. SPANGENBERGER

"Harry"

General Science

Will you have some sugar, Harry? No, thanks; it might make me stout.

We don't know what Harry doesn't know about surveying, but if there is anything about that subject in which he is not well versed, then that's what he came to school to learn; but sometimes we are inclined to think that Harry came to school to show the rest of us fellows up.

In years gone by Harry used to cut quite a figure in the political circles, but his ambition declined suddenly this year, due, no doubt, to his desiring to devote more time to his studies. We expect Harry to come back to form again next year.



IRVING TROEMEL

"Troemel"

General Science

Troemel, we have heard, is a civil engineer for a railroad. We are sure he is a valuable man. As far as we can find out, Troemel has never missed a lesson and his average is not less than ninety.

When it comes to figuring deflections in beams Troemel is the Shiek in disguise. We caught him one night imparting some of his knowledge on that subject to one of his less gifted fellow students in the hallway, meanwhile quite effectively blocking said hallway.

ERICH TWAROSCHK

"Erich"

General Science

More than one man has broken his best set of Sears-Roebuck teeth trying to pronounce Erich's last name, and many a man has pretty nearly burst his lungs cheering him while playing on Cooper's basketball team.

Erich has not been as active in athletics this year as in former years, but we hope to see him return to the fold again next year and shine once more.



THEODORE VON ZWEHL

"Von Zwehl"

General Science

Von Zwehl's name reminds us of the days of old, when knights were bold and barons held full sway.

We have a sneaky feeling that Von Zwehl has Dutch blood in him, directly descended from Peter Stuyvesant. When it comes to being vain Peter had nothing on Von Zwehl. When we went to the photographers to get our physiognomy recorded, we were satisfied to get the cheapest pictures. Not so with Von Zwehl. Say, Von Zwehl, were there any more expensive pictures to be had at the studio than the ones you chose?



GEORGE P. WILSON

"George"

General Science

Wilson comes to school to study and he sees to it that he studies. For that reason he is perhaps not as noticeable as some of the other more noisy chaps.

Wilson can be seen any night at 9:30 passing swiftly but silently down the hall in the general direction of the exit.

The JUNIORS



LOUIS WUEST

"Louis"

General Science

The chap with the perpetually blooming complexion. His cheeks are as red as the red, red, roses. He is short in stature but makes up for it in grey matter. As a draftsman he is always in the lead, and in his other studies he has never been behind the others.

Wuest is rather a self-contained chap, but he is always ready to lend a fellow a hand when asked for assistance.



FRANK L. AIGNER

"Lightning"

Architecture

Unquestionably the fastest exponent of the Orders class, so fast that in his Sophomore year he worked out one more problem than any other man, and carried off the honors of First Prize Winner. Not alone in this did he succeed, but carried off the First Prize in the Construction class after finishing his work of the first year in the same term. He bids fair to win as much success in his future enterprises, and he goes his path with the unstinted acclaim of all his colleagues.



FRED BALSAMO

"Fred"

Architecture

When "Bully" gets an idea (yes, he does sometimes) we all know that some instructor is going to have a bad half hour. We know that some exceedingly small item of interest is lodged in his ready cranium and he will not rest in peace until he eases his burdened mind.

Fred some day expects to build a beautiful house of his own design; for happy carefree "Bully" is no more, and Balsamo, studious and sedate, has gone and got himself a beautiful wife. May they live happily for the rest of their days.



ARTHUR N. BAMBERGER

"Bamby"

Architecture

Like his namesake of the diamond he is a home runner, and proof of it shows after school. He surely would make better connections but every now and then he must insert another fuse to startle the boys and he does so by an occasional display of skill at pocket billiards. As a startler, his electrical information and knowledge is in no wise subordinated by his electrical and magnetic personality. Some boy.



MICHAEL A. CAHILL

"Mike"

Architecture

Has a sweet tooth, and we can tell you that by our special study of him while he was working on the pantry of his small country house. He does love to frequent those places, although now slightly discomfited in so much as he has to go without his coffee and cake after school evenings, because the "hangout" has gone out of business. There being no drug stores in his near vicinity he goes to the next best place and that is home.

He is studying Architecture so that he may be able to construct and own a bakery all for himself. Some bakery architect.

FELIX N. CANTAMESSNER

"Duke"

Architecture

The life wire of the class; the prime mover in all activities and as such revered by the rest of us. With these attributes as working material he was elected by the class to the post of Associate Editor on the *Campus* for 1924. His answer was spontaneous to the needs of his office and it was not long before we felt the force of his unstrained spirit. Our response was in no wise curtailed in sincere compliment to him whom we know did his bit in the interests of the Arch. Dept. and class.

Receiving an honorable mention in Constructural Architecture last year while making the grade of Freshman and Sophomore in one, he also completed the Orders in the same year.

He merits prominence in the "Sketch Club," the "Fifteen Ball and Pin Club" and the "Know a Little More Club." Last but not least of the "Duke's" accomplishments is his ability to tell parlor stories and some are as darned good we're half inclined to believe them.

The JUNIORS



AUGUST F. CORSINI

"Augie"

Architecture

"Augie" is a willing and ambitious worker with lots of originality, but is very much wrapped up in his work, and for that reason says very little.

He has an extremely bad habit of finishing his work before the rest of the class gets a chance to start. We were never able to fathom the reason for this lightning swiftness on his part, but we have a sneaky suspicion that Augie likes to have plenty of time in which to admire the work of the Art classes.

In addition to his other crimes, "Augie" also won Honorable Mention for work in his Sophomore Year, and he has already given his classmates to understand that the prize this year is as good as his, and they might just as well stop working for it. Nice boy, "Augie."



ROBERT EPSTEIN

"Bob"

Architecture

"Bob" was treasurer of our class last year and as such proved himself worthy of the duties entrusted to him by his fellow students. This year he followed other pursuits, being an unusually active member of "The Fifteen Ball and Pin Club." In this he has gained considerable fame and small profit.

It is also rumored that he shakes a mean leg on the ball room floor and is a prime favorite with the ladies. Knowing "Bob" as we do we are inclined to believe this. Gaze at him folks and see if you have any difficulty in agreeing with us.



JOHN H. EVANS

"John"

Architecture

John comes to us from the wilds of Great Neck, and usually arrives late as he travels on the Long Island. But with us it's better late than never.

Every man must have his diversions, and John simply hates on arising early in the Autumn months to surprise the unwary ducks. It is said he is a marvelous shot. He admits it. John's other claims to fame aside from Architecture is his ability to handle a brassie and a masher. He plays his golf as he shoots. Results speak for themselves.

IRVING I. GREENBERG

"Prom Post"

Architecture

Did you ever know it to fail in any school when students were so pest proof as not to be reached by the Prom representative, that one should not spring up of such persistence as to be irritating. And his success depends upon the extent of this disease. Not alone having such in our midst, he had the disease in its most violent form and for this reason we can account for the tremendous success of the Proms. Aside from this we hear Irving no malice, but we are willing to state that his boss is advertising for a new man which means a raise, as every time the new man quits Irving's salary soars. Irving says he doesn't mind; so far two men have been employed and quit; he received two raises.



CHARLES J. HAMMERSEN

"Cholly"

Architecture

"Cholly" has very peculiar propensities, yet in spite of them he is our own dear little boy. Peculiar? Well, for instance, his front elevation is like the Woolworth Building, his shovel-like feet are as fast on the track and as nimble on the dance floor as are his hands in borrowing "stuff" from his fellow classmates. He has his own definition of "borrowing" which, by the way, coincides with our definition of "disappearing."

But "Cholly" is really and truly a great, budding Architectural genius. Humor bath it that he has refused a fabulous salary to serve with Barron & Bailey—and all simply to follow Architecture. Can you beat it?



ARTHUR HINDMARSH

"Hindy"

Architecture

Should "Hindy" wake up some morning and find himself about four inches taller he will have one of his greatest ambitions in life fulfilled. His favorite indoor sport is to tell the world in general, and us in particular, what a wonderful place Dumont, New Jersey, is. "Hindy" is one of the most studious in the class and some day we will live to see his name linked with those of our greatest architects.



LEROY HUNT

"Roy"

Architecture

Mr. Leroy Hunt has been very aptly named. He does hunt . . . the ladies, yes even in leap year. His witty, scintillating remarks; his "dog-day" smile; his entrancing manners, have captivated the weaker sex—he being of the stronger sex, by hypothesis. He likes to be heard so we'll just take a minute to hear what he has to say (by radio). Mr. Hunt speaking!!!

"Architecture is a matter of form and figure, and that is MY strong point. A front elevation which has a pleasing appearance and the proper proportions—a side elevation which has the proper contours, and a rear elevation . . ."

Here the radio went wrong and our imaginations must supply what Mr. Hunt has been unable to finish. He may have been thinking along feminine lines, but we'll give him the benefit of the doubt and suppose it was Architecture, his favorite (!) study.



ADRIAN JOSEPH

"Ady"

Architecture

Good fellowship, combined with school spirit, is a great asset. "Ady" has both. His sincere friendliness and wonderful personality make him one of the best liked fellows in the class.

A peculiar feature about "Ady" is that he knows more about the salaries and personal habits of the movie stars than he does about Architecture. Secretly, we think he has an ambition to become a star himself.

He is at present writing a book called "Why Motion Picture Stars Cannot Act," or "How to Become a Star by Studying Architecture."

We have little doubt as to his success as an actor, but as an author we think he'd make a good Architect.

The JUNIORS



SAMUEL M. KURTZ

"Kurtz"

Architecture

As the Vice-President of the Junior Class, Kurtz has done much to promote good fellowship and better organization.

Very dignified and scholarly in appearance, Kurtz commands the respect of all who come in contact with him. He tells us that his one ambition in life is to be able to point to a building in concrete form and say, "I designed that." Which leads us to say that it is an ambition worthy of a lifetime and cannot but bring happiness to him.

But we have just one fault to find with Kurtz. He wears spats. (How romantic.) Which gives us the impression that he is trying to hide the fact that he wears no socks.

But we have got to overlook this shortcoming in consideration of all the fine work that Kurtz has done, and we hope will keep on doing.

WILLIAM J. LOFSTEDT

"Whitey"

Architecture

"Whitey" has two striking outstanding features, besides the ones he brags about. Firstly, his golden locks that seem to hypnotize the eye and hold you spellbound with admiration and envy. Secondly, his ruddy complexion, which he tells us he acquired shoveling snow (his one great success) in the wilds of Jersey.

He comes from an aristocratic and ancient family, and can trace his lineage back to the time when his great ancestors swung by a tail from a tree.

He hibernated in the state of Jersey until three years ago when he came to life and to Cooper. We've suffered ever since, but it has made a great improvement in Jersey.



BENEDICT MINZER

"Ben"

Architecture

"Ben" is an Architect! "Ben" is a Builder! "Ben" is . . . well never mind what else he is, for if we examine his ambitions we'll find "Ben" is everything and everybody. His ambitions would make Caesar's look like small town stuff. Indeed, his ambitions extend even to his fellow classmates, for he always has a job, or can get a job, for any one of them.

But besides ambition, "Ben" also has a stupendous hunger (not for food) and a gigantic thirst (not for home brew) for knowledge. The Encyclopedia doesn't contain enough accurate and detailed information to suit him, so he came here to study, and study he does.



JOSEPH MOCCO

"ProL."

Architecture

An optimist is the truest sense of the word. One who has been gifted with the greatest of all gifts, a happy disposition. We don't remember ever having seen Joe with a frown on his face; in fact, he would look unnatural with one.

But we all have some trouble, no matter how small, and Joe has his. He tells us he is constantly being annoyed by "wisemen." In fact, he says that it is actually getting him mad, and he thinks he will have to get married and put a stop to it all.

So you see even an optimist has his troubles, don't you know?



JOHN S. MORGAN

"Jack"

Architecture

Who can forget the smiling and pleasing countenance of "Jack" when in his Sophomore year he stood out as a persevering character in the interest of school activities, and did his utmost to spread it in the class. As president, to which office he was unanimously elected, it was not really necessary that he be entailed with the tremendous amount of work which he took upon himself with no small success, and with all this he won third honorable mention in Constructional Architecture.

Sadly it was, that we were informed that he could not take office during the current year as he was so heavily burdened with his vocational occupation; but in stages this work gave him some time to devote to activities, and with a sense of great exuberance he accepted the responsibilities in the class workers for the Class.

He is a member of the "Know a Little More Club," "The Fifteen Ball and Pin Club," and "Sketch Club."

His association is indeed a treasured one.



HAROLD D. MORRIS

"Hal"

Architecture

"Hal" is our budding genius, who has fully earned our highest appreciation and respect, for he has qualified in the three A's—Architecture, Acting and Athletics. He can put the neatest kind of a curve on a drawing and on a basketball and quotes lines from Shakespeare to perfection.

"Hal" looks at life in a very serious way, and is very, very ambitious. Yes, sir. He logs all the honors for himself. For the past two successive years he has been awarded First Honorable Mention for his work.

We feel certain that his unusually fine character and wonderful personality will some day carry him to the heights of fame and we hope fortune. Go to it Hal, old boy.



JOSEPH A. NICOSA

"Nick"

Architecture

Slow but sure is "Nick's" motto, and he followed it nicely with his country house of the Ancient type. He is a man of few words and just as much more action. Contributing to all necessary school activities, he finds time for dining, at which he tells us, he is a past master. Do we believe him? Well, we leave that to your imagination. But we will say that he is a model student in a class of future architects, for which he has far off visions.

IRWIN BENJAMIN NORINSKY

"Ben"

Architecture

True to nature, as betrayed by the curl of his hair, he is quite fond of excursions, to such an extent that his work this year in the Orders is full of them. He was one of the men who made the grade of two classes in Constructural Architecture in one year and along with it carried honorable mention in the Orders class. He is no mere manipulator of the pencil and brush, a training in the latter of which many a married man may have reason to covet. No fear that his good talent will go to waste for he may become a benedict as a commencement award, and his ability to paint small country houses will then stand him in good stead.

No more duck shooting in the Long Island marshes, for he will not be able to enjoy it, especially when he has to get up in the wee hours of the morning that he may sneak upon them while they are still sleeping.



HARRY L. POINSETTE

*Architecture**"Bud"*

Coming from the county of Chester, Pa., where we believe coal comes from, and knowing coal to be carbon, and also knowing that diamonds are carbon, we are under the impression that we've received a gem from the railroad which brought "Bud" to us. Consistent with the dictates of destiny we've found no better miner in the class than "Bud," who was elected class vice-president in his Sophomore year and class executive to the Comm. board this year. His activities in all channels of social development have been unlimited and we know our gauge was right when we selected him for these responsible duties. His masterly discretion in his obligations is praiseworthy and thanks are wholeheartedly voiced by his colleagues. No force is more powerful than his smile and personal magnetism.

He is a member of the "Know a Little More Club," the "Fifteen Ball and Pin Club," and the "Sketch Club."

ALEXANDER RICHTER

*"Al"**Architecture*

"Al" likes dancing. He is, in fact, the most self-confessed dancer in the class. At 7:00 "Al" dances his way into Cooper, dances around over his drawing board, and at 9:00 dances his way home. That boy sure can move his pedal extremities. There has not been a basketball game and dance that "Al" did not attend. He says he goes only to root for the team (of course not to dance).

But "Al" manages to find time between dances to take an active interest in all class and school affairs. He is our class delegate and a finer delegate never danced his way into the meeting room. "Al" intends to hang out his Architectural shingle as soon as he graduates. The best of luck to you, "Al."

The JUNIORS



PASQUALE L. SANTORO

"Santy"

Architecture

"Santy" is the silent member of the Junior Class. His silence at times is very deafening, but he tells us that he hardly has time to breathe, much less talk. Which is the truth, all the truth, and nothing but the truth, for "Santy" is not only studying Architectural Construction, but is taking the course in Architectural Design. A very SIMPLE (?) method of completing eight years' work in four. If that isn't ambition personified, what is?

"Santy" also has a very peculiar mania for winning prizes, taking First Prize in his Sophomore Year in Architectural Construction and First Honorable Mention in Design.

Say, "Santy," how do you do it?

WILLIAM SINAGRA

"Bill"

Architecture

"Bill" hails from the Bronx, and he doesn't care who knows it. His chief object in studying Architecture is to concentrate his knowledge toward beautifying his home town, and making nice motion picture theatres.

"Bill" is always smiling, not because he has a sense of humor, but "Bill" was actually born with a wonderful 18 karat gold tooth in the front of his mouth, and he just loves to show it. It's his pet tooth and he's proud of it. In fact, he says if he ever goes broke he can hock the tooth. But "Bill" being fastened to the tooth would considerably lower the value of it.

Don't lose heart "Bill"; when the time comes to sell it, you'll find a sucker.



NATHANIEL SUMIN

"Nat"

Architecture

When a fellow is unanimously voted the best looking chap in the class; is unanimously elected to the position of class secretary; and has a cellar full of home brew, there isn't the slightest doubt in our minds but that he is the most popular man in the class.

"Nat" takes his position as class secretary very seriously, and whenever we hear the familiar "Secretary will please read the minutes of the previous meeting" we know that "Nat" is going to do his stuff. And he sure has some stuff. When it comes to writing up a set of minutes that boy has an imagination all his own.

"Nat" missed his vocation when he studied Architecture; he should have been an Author.

CHARLES TAGLIABUE

"Big Boy"

Architecture

Charles is tall, very tall; in fact, he is so tall that he lives in an atmosphere all his own. But we certainly envy Charles his dignified bearing and wonderful build.

It is whispered about among the "Smart Set" that Charles is the Eighth Wonder of the world. He speaks seven languages (one for each day in the week) including English, but he keeps this fact pretty well under cover.

The first time that Charles saw the Woolworth Building he liked it. The second time he wondered what held it up, and the third time he decided it was a cinch and he would build more like it in the future. Hence, we have him with us.



BERGER VON SETH

"Pep"

Architecture

Sounded in one of earth's corners,
Blaring the Roll of the day;
A call to a worldly soldier
He answered taps to stay;
As a faithful, obedient soldier
Would do when the lights go out,
Berger von Seth our Colleague sleeps,
Tomorrow he will not be out.
He will answer no more earthly revellies
But on Judgment day he'll arouse
To greet everyone in his real friendly
way
His friends, his children, his spouse.
His labor is o'er, he'll study no more,
His merit—a heavenly award,
He perfected his Peace and Monument
In a spirit of love and friendship's
accord.

JOHN WEBER

"Johnny"

Architecture

He hails from Jersey and brings with
him the snap and bite of a mosquito.
For this he was made president of the
third year class (with the help of the
course in a correspondence school he
raves so much about). Johnny is a
draftsman, considering the English house
he drew. It was too good to be true
but not the masterpiece he claimed it to
be. He had better stay with his books.
"Oh, yes," he plays the violin nicely, and
always has an audience of a few people
—very few. He is a member of the
Student's League and is always ready to
attend proms and parties, for these are
his favorites in sports. All in all, he is
a real Jersey Sheik.

WILLIAM H. ALBERTS, "Al" STP

Institute of Technology

You all know "Al." He is that quiet chap that braves the journey over the Kill van Kull to come to civilization every morning. Yes, and to relate, he comes from that place called Staten Island.

In spite of this handicap, "Al" is a crack athlete. He is a fine swimmer and a good basket-ballster, being on both Varsity teams. "Al" is so greatly interested in all sports that he does not care for the social side of school life. "Al" is what you would call a "Man's Man."

"Al's" hobby is pinhead playing. Whenever he forgets to do his homework you can bet he has been winning. Cards are much easier to understand than Calculus, says "Al."

JOSEPH ANASTASI, "Any"

Architecture

The time will come when little Joe will say that Peter Cooper did a wise thing in starting an institution bearing his name, for pleasant memories linger. One of the most ambitious workers in the Junior Class, he finds time to attend another school. More power to him.

FREDERICK C. ANTHRECHT, "Fred"

Chemistry

Here is a man with a comprehensive knowledge of Long Island's darkest roads, gained by constant inspection with his trusty Ford sedan. Fred specializes in the quiet lanes that the road maps do not mention.

Viral reflets and the ladies (ladies 'em) are his special hobbies, but he may occasionally be found in Brooklyn, where he researches in pharmaceuticals, and admits a drug with the boss.

A. BAUMAN, "Bauman"

General Science

Bauman is one of those dark eyed, dark haired personages that pass along from year to year without being noticed. When it comes to knowing one's lessons we are quite sure that Bauman can hold his own end of the oar, but it is hard to make a definite statement about him. A good name for him would be "Question Mark."

When he first made his appearance in Cooper, we have no recollection of. He must have slipped in with the draft when the door was open. However, we might go on record as stating that as far as having a whole faced smile is concerned, well, he has two entirely different set of features, one when he smiles, and the other when he is serious.

ABRAHAM BELTZER, "Beltzer"

General Science

Beltzer is the young man who always gets his hair cut like a Greek warrior. The barber's college must have a special reduction on that type of clipping. Beltzer's haircut, however, does not stop him from thinking clearly. He can always be found in the students' room away over the corner studying his head off.

O. F. BLOMSTERGREN, "Blomstergren"

General Science

Blomstergren is another one of the men who haven't had enough but must come back for more. Blomstergren is back in school again after having taken the Civil Engineering course.

The question we wish to ask Blomstergren is, when will you learn enough to satisfy you?

S. BLUMBERG, "Blumberg"

General Science

When it comes to being studious Blumberg takes the apricot pie. Blumberg is the fellow who always turns his homework in. We don't know if he does it himself, but he has never been caught in the act of copying. Oh, well, one must turn his homework in.

Blumberg is another one of those men who are so wrapped up in their studies that one seldom hears from them.

S. BRIEGER, "Brieger"

General Science

Brieger is a shining example of upright collegiate manhood. He chews gum, wears out pencils uselessly and at times indulges in light profanity as any college man of good moral standing does.

But for these few faults, Brieger would be passed by the board of censors provided they all were blind. We don't know if Brieger beats up his wife, neither do we know if he has any.

JOSEPH BRODY, "Brody"

General Science

Steve Brody took a chance but not so Joe Brody. He believes in not taking any chances especially when it comes to passing his term's work. Oh, yes, you can always find Brody in the study room doing out his homework the night after it has been assigned.

There are many of us who might get their homework in more often and more of it if we followed Joe's example of getting right after it, instead of leaving it to the last minute.

GASPER BUSSANICH, "Gasp"

Architecture

You may wonder at this queer title but if you'd see him gasp in question when estimating, at the startling revelations and final decision of his question, there'd be no reason to wonder. He also gasps at the chariot and saxophone, and little need be said about the manner in which he backs everything down.

F. CANNIZZARD, "Cannizzard"

Chemistry

If our prediction of this college "yap" of ours does not come true we will take the \$6,000 rubles and raise the prof's salaries. Cannizzard has the earmarks of a teacher and also the gestures. He goes our prof. about fifty staggers better to the minute.

The C. U. S. L. is enriched by calling him one of its constituents. As a speculator of tickets he is a closed ring compound, very hard to separate from filthy lucre. He recently bought a new tie, a four-in-hand affair, and wanted to return it as the yellow pencil stripe made it kind of loud, duncha know. He said he looked like a female hopper. Yea Ho. Giddap.

F. P. CASSIDY, "Cassidy"

General Science

The gentleman of the dark curly hair who sits in the front row in the mechanism class and pays such good attention to the instructor's lecture (who knows, perhaps he actually does). Oh, well, as long as there are guys like Cassidy in the class how do you expect an ordinary fellow to make a showing.

O. COHEN, "Cohen"

General Science

"Oh Cohen, O Cohen, how could you be so mean?" That's not so bad except for the fact that we don't think Cohen is mean.

Shades of lavender, what can we write about Cohen. Well, not much, that's a fact. Anyway we can say this about him—He's the first fellow in class and the first fellow home, and we also have observed he wears rubbers on rainy days.

THEODORE COHEN, "Teddy"

Architecture

A student of Architecture is he, but better qualified as a sign painter as has been seen by the landscape on his country house. He plans to leave his rambling State at home on school nights next year, but not the saxophone he plays so nicely; that would be a catastrophe. The chronicles show enough of these so-called catastrophes to warrant their early arrest.

JOSEPH COSTA, "Costa"

Architecture

An unknown in the matter of speech but how his work does talk for him. He is continually acquiring new knowledge and information in the matter of construction and the result of his studies is quite evident, but oh when he seesus he does anoon. We anticipate in wonder whether the result is to be destruction or merely brain eruption.

CAMILLO D'ALESSANDRO, "Camillo"

Architecture

Mysterious in many ways but one, that we know of, and that is in the Estimating and Plan Reading Class, which makes him mysterious but he makes no bulls after this term's work. He tackled this in a flash and it is now finished to be done no more. How say, Camillo? Some day the children will be graduates of Cooper Union and the school will be justified.

HERBERT DOELE, "Herb"

Chemistry

This man jogs in from Paterson every evening—"jogs," because he has the misfortune to live on the Erie. For this reason his lectures are condensed by the instructor, who was once forced to travel on that road.

"Herb" has one painful fault; he can form more pens than an H-S generator can gas. They bubble forth without the slightest provocation and the quality of most of them can be likened to the odor of the above-mentioned famous reagent. Normally, when he isn't springing these atrocities, "Herb" is one of our leading scholars.

SAM B. DONNELLON, "Donnellon"

General Science

When it comes to summing up his faults we find (by a special slide rule we have) that they equal zero. You see it could not be infinity as our slide rule does not read that far. We often have wondered whether Q. E. D. is the initials of someone in his family. Perhaps it is his sister Quennie's. Who can tell. Let's not guess.

We know instructors who administer seras smilingly but Donnellon is the only one whom we have come in "personal contact with" (that phrase is reserved to be used in connection with great personages, that's why we use it) who can be cheerful after getting one of those tens with the one left off.

We do hate to think that Donnellon has gotten his grey hairs because of overstudy.

DANIEL B. DONNELLY, "Donnelly"

General Science

This gentleman of the nose glasses and straight brushed hair is the engineer (?) who sits in the front row of the mechanism classroom and who we observe always stands up as if looking for someone in the back row. We wonder if his magnanimous nature compels him to give us the opportunity to see the most wonderful physique in captivity.

Outside of this one point and the fact that he is not inclined to buy tickets, etc., we rate Donnelly a pretty good chap.

JOHN ERICSON, "Dapper Jack"

Architecture

Who can say that New Rochelle has no outstanding examples of handsome Romeos, when with one look upon his six feet of poise and grace we gasp and wonder at the efficiency in such a direction. With his skating tags he attends school in winter, gulling tags in autumn, and riding tags in spring. Well, after all, the surprise is he won the Second Prize award in Construction in his Sophomore year and finished his Freshman year in the same term.

WILLIAM FETZER, "Bill"

Architecture

"Bill" is the best little barn builder on this side of the pond, by his own admission, which makes that unanimous; but excluding that little thing he is one of the most amiable fellows in the class.

When "Bill" starts blowing (Finsiff) we all stand around and gaze with awe at the wonderful power of his lungs, and should Cooper Union find itself in dire straits for a Marathon runner, it could not do better than call on "Bill" Fetzer.

ALFRED M. FRISCH, "Frisch"

Chemistry

Frisch is the class tragedian. He was so realistic in his monologue on Matthias and the rope, that his listeners started to remove their collars.

Besides this, he likes to belong to chemistry clubs. He organized one in Chemistry, '24. The regular weekly meetings, which was held once, was a tremendous success, four persons, including the lecturer, being present.

Frisch is going to join the H. O. H. if the members are "nice boys."

CHARLES FUHRMEISTER, Jr., "Charlie"

Chemistry

Charlie is an active member of the Jersey Club—that aggregation of energetic commuters which storms the walls of this mighty metropolis every night in its dash across the Hudson.

Charlie has long since dropped the habit of being regular in attendance—maybe married men are not supposed to—but, at least, he comes prepared, which is more than most of us Eastern bachelors can boast of.

PHILIP G. GREISS, "Greiss"

General Science

Greiss impresses one as being a rather studious chap. His class marks bear this out to some extent. He has never been caught red-handed as the leader in any class activity, but those of us who took the trip through the Navy Yard will remember who it was who went to the trouble, on his own initiative, to secure permission for us to do so.

All in all, we vote Greiss a good fellow.

JOSEPH GELBMAN, "Archie"

Architecture

Being somewhat abbreviated in form we abbreviate his name. He is a competent architect, having graduated from Budapest University in the Orders, and is now attending Cooper Union for more complete development along the lines of Construction. He has done exceedingly well passing the Freshman year and carrying off First Prize along with completing the second year work in the one term of 1923.

WILLIAM C. GELBMAN, "Gelman"

General Science

This promising young embryo civil engineer has always been way up the line when it comes to marks. He hopes to be monarch of all he surveys when he learns a little about surveying (yes, there is still something he can learn about that subject). The secret of his success may be that he can always be found in the library studying, and after all that is no secret.

Not to throw snowballs at anyone in the summer time or, as the poetically inclined would say, to cast aspersions, we think that Gelman will become a success in any line he follows if stick-to-itiveness will help.

SAMUEL GILDENBERG, "Gildenberg"

Architecture

An ambitious lad with plenty of pleasantries about him, and if he doesn't succeed in this manner of relief, he is gifted with a fine line of parlor stories which he gets on the train coming in from Paterson, N. J.

He is taking Constructional and Orders Studies at the one time, and is fair to bid for honors in the future as he did last year in the competition.

ROBERT GREENWALD, "Robert"

General Science

Say, can this boy dance! And we believe he makes up his own steps, too. Perhaps that is why he didn't manage to get to the Junior Prom. He disdains showing us other boys up. Oh, well!

ROBERT HARMEL, "Robert"

Institute of Technology

Robert is the champion memory student. He will memorize a whole book before an exam, but for fear of embarrassing him his classmates will not ask him any questions a week later. There is not much of him at Cooper (4 feet 9 inches), which may account for his shunning school affairs and organizations. On a recent power plant visit he was rescued from being used as a R.T.U. by an energetic fireman who had to look twice to make sure he didn't have just an extra large lump of coal.

The old story about little boys being seen and not heard is here completely reversed, for Robert is some talker. He is always asking questions and the bar is certainly losing an able-bodied lawyer.

MOSES HAUSMAN, "Moe"

General Science

We take pleasure in introducing to you that most illustrious gentleman, Mr. Moses Hausman. The sport we like best is trying to sell him a ticket to a game or to help the other activities along. When asked by a classmate to buy a ticket the only reply ever elicited from him is to the effect that he is not a philanthropist. Oh, well! what's the use. All we can say is, "What will Hausman be Mr. Gallagher, Why a banker Mr. Shann."

EDSON HOWARD, "Howy"

Architecture

"Howy" will surprise us some day by leaving his drawing instruments home. The electric wind has nothing on Edison when electrical theorems are being discussed. All through his school career he has proven to be one of the most successful and diligent scholars. He is one of the crack shots of Westchester and he wields a mean paddle on Long Island Sound in a sea-going canoe.

ALPHONSE KAROLAK, "Karolak"

General Science

Everybody must get some exercise, but Karolak gets enough for himself and the rest of the class combined. He is a member of the Turn-Verein and can give you a demonstration of the different Jiu-Jitsu bone breaking stunts. Nothing charged for an infinite number of lessons. Karolak is also a basketball enthusiast.

We do not find Karolak at the bottom of the class either; quite to the contrary he holds a position well up the line.

CHARLES KAVER, "Charlie"

General Science

The wonder man, who outdoes all the short-hand authors by his ability to record every word the instructor says, and is laughed at that. Charlie is contemplating the publishing of an up-to-date treatise on hydraulics entitled "New Facts and Theorems in Hydraulics," or "Hydraulics Condensed So That the Who Hum May Read." The most important feature of his new book will be his conclusive proof that water will flow uphill.

WILLIAM PERRY KEARNEY, "Kearney"

General Science

We are against those cheap dime novel writers who knock a man's home town. How would you like it if you lived in Ceyterville, N. J., and some one wrote nasty, horrid remarks about it? We wish to go on record as saying we like Ceyterville, South America, or rather, oh my yes, much rather New Jersey.

It can be said that Kearney is about the most earnest chap we know of. Besides holding down a job as husband and provider, he has a responsible one with a big corporation. All credit to men like Kearney who, even after they are married and have children, can still go after the obtaining of a better knowledge of things.

JOSEPH J. KOVACSOVIES, "Kovy"

Architecture

A fine and alert lad, who is attracted solely by the Orders, for he feels the need of this branch of Architecture, and is perfecting into a designer, from a stage of high efficiency in Constructural detailing. He won the Orders honor mention last year. We predict his winning First Prize in the Junior year award this coming commencement.

MAX KRANTZ, "Max"

General Science

The one with the perpetual smile and always blushing cheeks. His cheeks are so red that roses feel like hiding when he is near. "The Roses all envy the blueness on your cheek" must have been written with special reference to our lanky classmate.

Max is a true optimist, his favorite saying being, "It Max no difference when the exams come around."

JOSEPH LANG, "Joe"

General Science

Perhaps there are quieter people than Joe, but they cannot be much quieter. Quietness is his middle name. The only time we have ever heard him speak loud enough to make a noise is in the mechanics classroom. When the prof. calls him, however, Joe seems to step right out of his customary manner and waxes eloquent to the nth degree.

Joe is in a class by himself when it comes to going home. He doesn't give the bell time to cease ringing before he is out the door.

STANLEY LUKASSUS, "Luk"

Institute of Technology

"Luk" knows everything that goes on at the class meetings (by inquiring the next day). He is a chap very seldom heard from, but at times he puts across many an electrical theory. He disappears very quickly when the dismissal bell rings at 4:00, the reason being that he is the "worker" of the class, which leaves no time for frivolous pastimes.

SALEM MASAROF, "Masaarof"

General Science

This young gentleman of the fuzzy hair and thick mustache is the fellow who is always asking "How do you do it." He is not averse to giving his own opinion on how it is done, and his classmates are of the unanimous opinion that he has wasted enough of their time to cover a course in dress designing. Anyway, we would miss his familiar voice if he were not with us and so, while we can, we shall enjoy his company, as he may, although we do not think so, intrude to the final exams.

FRANK MASIN, JR., "Frankie"

Institute of Technology

Frank belongs to that famous gang, the Three M's, Mussie, Melers and Meyer. He firmly believes in that old proverb: "United we stand, divided we fall," and in consequence he is a Junior.

Since becoming a dignified Junior, Frank has abandoned his childish pranks. He was the skillful manipulator of a rubber band and paper wads, much to the annoyance of his neighbor's neck. Now an amendment has been signed allowing his fellow students to get more sleep in lectures.

CHARLES MEYER, "Char-lee"

AMΣ

Institute of Technology, M. E.

The Class of '34 soon learned that Charlie Meyer was a born leader of men, he having earned this distinction by his ability to maintain respectful silence at one of the first class meetings when we were freshmen. He admitted it under pressure; and having been silent once, thought that was enough.

Charlie profits by previous experience and keeps us awed by his knowledge of little private affairs. Occasionally, however, he breaks loose, forgets his dignity, and acts like any overgrown kid.

We all remember when in E. M. class the instructor was interrupted in his endeavor to penetrate our worthy dorms by Charlie who burst out with "How come?"

NATHAN MITTAG, "Mittag"

General Science

Nathan will yet prove himself to be the wonder of the age. He has vowed to build a bridge very shortly (we wonder if shortly refers to the length of it) between New York and London. Well, we wish him the best o' luck and hope he doesn't get wet while constructing it, for then he will have to change his plans and build a bridge from New Moon to Heaven.

We also take great pride in informing the general public, including the gentle reader, that if you wish to learn more about the Fountain of Youth, young Mittag will be glad to discourse on that subject. Line forms on the right.

THOMAS MODER, "Tommy"

Architecture

Normally, Tommy is a "half-fellow-well-met" and a model supporter of all class activities, but, being a Radio Bug as well, unless he is reminded of a scheduled meeting, he is quite apt to be on his way home to "listen in."

Tommy's chief aim in studying Architecture is to beautify his home, especially the re-location of a fence on his back lawn. We wish him luck as we don't think the authorities will sock his advice.

MORRIS MORBEIT, "Morris"

General Science

Here in our midst, in the guise of a student, we have the Major of Brownsville. When Morris struts about his native town in his Sunday regalia, all the population cast eyes on this most noble Roman.

We wonder why they named the Morris chair after him, but on second thought we are inclined to see the connection. Solid mahogany all the way through.

JOHN MUSSO, "Muss"

Architecture

When a "muss" starts Muss is there. "Our class right or wrong, but our class," is his motto. To see him among a group of men upholding the honor of his class by his marvelous elocutionary powers is one of the most delightful sights. We predict a wonderful future for this young man.

CHARLES NADLER, "Charlie"

Institute of Technology

"Silence is golden." This old adage must have been written after the originator had met Charlie. He is a quiet chap but very ambitious; being a Brooklynite may account for this. He is at school before the library is opened, waiting to enter and start his brain whirling. Charlie is no genius, but you can't put anything over on him.

Charlie is a basketball player, so can be evidenced by his romping around the gym floor between halves. He attends the home games but sits up in the balcony with a dozenish books before him, writing reports. The cheering (?) that comes from his place of rest must surely inspire the team. It takes a lot of persuasion to get Charlie to a class meeting but, once he is there, he is always ready to make a motion to adjourn.

F. A. NAEGELI, "Naegeli"

General Science

Naegeli is a fellow who seems to keep apart from the rest of the class. Perhaps if we were already a graduate of the Electrical Engineering course we would, too.

We wonder if Naegeli will stop when he has received a B.S. in M. E., or if his thirst for knowledge will still remain unsatisfied.

WM. A. PAGELOW, "Bill"

General Science

"Bill" is in a class by himself when it comes to being cheerful. He cannot be called a good mixer, but he is well known and liked by all his classmates.

When Pagelow laughs we cannot help thinking of the laughing face Strophichast has made so famous.

DOMINICK PAPPALARDO, "Pappy"

Architecture

There are times when "Pappy," studious and ambitious, is neither seen nor heard from, until some question arises as to which is the best of the mosaic designs; and from that time on "Pappy," studious and ambitious, is no more, and Dominick, designer, is good for two hours. The question in our minds as we try to digest his angles is whether or not he should go out by door or window.

JOSEPH POLLIO, "Sapolio"

Architecture

In our midst a young man beams up. A heart of no mean ability and a ball room dandy. He closely follows all the principles expounded in class. To be an architect is his desire, and he must be one if he learns the difference between a Doric and Corinthian Cap.

EDWIN F. POTTER, "Eddy"

Architecture

We now have with us a young man struggling with architectural problems finding it not as hard as it seems. He is "Eddy." With him we have the old motto, "Silence Is Golden," which he follows with great success. He has worked hard and has made a success of his work already. Woodbridge, New Jersey, is his home town, and the "Eric, slow progress railroad" has another bounding comrade. A lover of all sports and a supporter of all school activities. We of the class bear in mind always that still water runs deep and muddy.

FREDERICK C. READ, "Fred"

Chemistry

Adjust your tickler and listen to this.

F. C. Read, a native of Elizabeth, N. J., and raised on hard boiled vacuum tubes, drifted into the Class of '23 on a series of undamped waves called the 101. In his work he has made a special study of crystals and has developed varieties which melt lovely, sweet, sparkling music. We do not hesitate to assert that, in a short time, he will have concerts flowing out of every wash bottle in the lab.

EMANUEL ROSENTHAL, "Emanuel"

General Science

Cooper took a great stride in its progress when Emanuel dropped in from Brooklyn Poly for a stay of a few years. We expect great things of Emanuel. If he keeps up his record of high marks he will soon leave us all behind.

Emanuel would make a good lawyer if his appearance counted for anything. He would also be a good advertisement for some permanent wave concern.

MATTHEW RUSSO, "Matty"

General Science

"Matty" is basketball personified. To see him shoot baskets and to watch him prevent scoring by the opposing team is a pleasure any day of the week. "Matty's" basketball is peculiar unto himself. He looks like an unbalanced jumping-jack when in action, but he never fails to turn the score toward Cooper's side, not only by his scoring, but because he always transmits some of his pep to the other fellows. "Matty" is a graduate of the C. R. course, but has come back for more in the M. R.

JAMES SALEM, "James"

Architecture

On his epitaph will be writ:

No school spirit. Dumb but happy. Titled his plates before he started so he'd know what he was drawing.

M. SANDS, "Sands"

General Science

When you say "still water runs deep" you must add "and swiftly" to it, to make it applicable to Sands. Gee, he's a "div" with the girls. They say as how he can get a new one quicker than that.

The only thing we might have against Sands is that he never gives us an introduction to his lady friends. The fussy rascal! Bet the young lady he brought to the Junior Prom was his sister. We guess not!

VINCENT A. SCHICCHI, "Vinnie"

Architecture

He tells many fair tales about the ladies and is gifted with an imagination not acquired by experience. Well, experience will tell; he is getting married soon and though we anticipate hearing good stories in the future we hope they shall not change in tone. Luck to "Vinnie" and the bride-to-be, is our fervent wish.

JACK SCHIFF, "Jack"

General Science

Jack is one of those level-headed chaps about whom the girls are all crazy. (They don't know any better.) That is, he is level-headed until he shoots off at an erratic tangent, (as he sometimes does without the least warning), from the straight and narrow path and gets intoxicated on raspberry sodas. Yes, and he's some punster. Keep it up Jack, you may crack a joke some day that will make us smile broadly.

SAM SCHIFFER, "Schiffer"

General Science

If appearance had anything to do with it Schiffer would be the king of virtuosos. With his mouse-eared, coal-black hair and that temperamental air he possesses, he looks as if music were going to be his vocation in life instead of such an unromantic profession as engineering.

Nevertheless, Schiffer does have something to do with notes. He copies every word the instructor utters although we would not care to say whether or not he is able afterwards to read what he writes.

I. SCHILLER, "Schiller"

General Science

The human question mark. He could think up more questions quicker than anyone else in the class, rather than prove Bernoulli's theorem. His questioning is so exhaustive that it leaves nothing to be asked for.

When it comes to answering some questions put to him by the instructor though, he would rather be out to lunch.

J. E. SCHNEIDER, "Schneider"

General Science

Na, boys, we cannot tell you if Schneider is a relation to the manufacturer of that famous caltrop. Ask dad, he knows.

Schneider, we have noted, always uses a slider, on his slide rule, equipped with a magnifying lens. No wonder he always gets the exact answer.

RALPH SCHUBERT, "Ralf"

Institute of Technology

"Ralf" came to us this year from the Night School. His hobby is to literally hang on to the profs' every "word." His school masterpiece was the "measuring up" of the Thermo Lab, with a micrometer. "Ralf" bought an A. A. ticket, so we all wish him luck.

SAM SINGER, "Sam"

General Science

Sam, if issues count for anything, must have come from a musical family. He can sing out when he wants to, as we all know. Did you inherit that melodious voice, Sam? How sorry we feel for you. We have had things wished on us, too, and we must take the bitter with the sweet.

All of which amounts to nothing—ask Sam, he knows what we mean.

GEORGE SIPKIN, "Sip"—"Financier"

Institute of Technology

"Sip's" boyhood training was always toward the ultimate end of reverend father. For years his thoughts were of priesthood, but a woman crossed his path, as they always will do, and George was compelled to join our ranks.

He is adept at money, securing a small fortune through the steady act of matching pennies, often going without lunch when the horizon glowed with two or three cents.

DAVID SLINEY, "Dave"—"Pinnacle of Wisdom"

Institute of Technology

The halls of Cooper will long and loud ring with the fame given it by her illustrious product, David Sliney. Dave's eagerness for re-exams was early exhibited in his Fresh and Soph years, but his work this year indicates that that eagerness wore off—he is going right through.

As an athlete Dave is all that can be asked for by any famous institution. In the 1922-23 class bowling tournaments he was the hope of his class, hitting the 200 mark each time, but winning by only a scant margin.

BENJAMIN SOSNOFF, "Bennie"

Chemistry

This chemist is a distinguished character. It was two or three years ago that "Bennie" discovered two very rare chemical compounds; they are "Tish Tish Chloride" and "Glauss Acid," for which he was dubbed "Duke of Scotland." He received other decorations which have since disappeared by the use of modifications. "Bennie" is champion breaker buster and no one has ever challenged his title. He is not only radical with glassware, but treats social reforms in the same light. A good contemporary of "The Shame Woman" would be "Bennie" as "The Shame Man."

HENRY STROTHKAMP, "Herrales"

Architecture

When Henry was born he was a normal baby. Now look at him. He weighs 250 pounds (not much less than a horse), eats three pounds of raw meat at every meal, and chews iron for pasture.

Henry jogs his weary way down from Harrison every night, and at 9:15, when he leaves, we all know that Henry is starting his journey back to the wilderness.

Henry has a very rare collection of jokes and stories, and whenever we hear the familiar saying, "Did you hear this one?" we know he has the floor and is going to spring the new one he heard coming down in the smoking car.

His hobby is basketball, and he is on the Cooper Second Team, an achievement of which he is very proud.

GEORGE W. SUSEN, "George"

General Science

George is fond of making wise cracks in the mechanism classrooms. What he doesn't know about gears would fill a couple of volumes, and that's one volume less than we would require.

George is one of the back row gang who always looks wise and speaks wise. Although he may not have a high rating in Dun's or Bradstreet's, George is in the A1 class as far as students are concerned.

B. T. TICE, "Tice"

General Science

The man with a purpose. No matter where he is, Tice always remembers he is a Cooper Union student and is one because he is desirous of becoming an engineer and not a comedian.

Steam is Tice's hagaboo. If there was no steam Tice would never get into hot water.

ABRAHAM VINIAR, "Abe"

General Science

We haven't been able to get much of a line on "Abe," but from appearances we think he should make a good engineer.

We are sure "Abe" would attend the class meetings if he ever heard about them, but we are quite sure he never has. Business meetings are perhaps of minor importance to "Abe," as his studies take up quite all his time.

PAUL A. VOIGHT, "Vaight"

General Science

All we have ever seen Voight do, is to come into the class and go out again. He does not seem to make enough noise, when in the classroom, to be noticed. Perhaps he is studying so hard that he hasn't the time to do so.

As may be expected, Voight, while not what one might call a second Newton, is above the average.

FRANK E. WELER, "Fw"

General Science

The shirk of the 1825 class.

When this young man first came to school, he was about the most enthusiastic supporter of school activities there was to be found. However, the milk of human kindness must have soured in him, as he has consistently refused to help since then.

Mr. Weler is known best in collegiate circles as the author of that famous statement uttered in mechanics classroom, "It may be obvious, but there is no proof for it."

EIBE A. WILCKENS, "Wilckens"

General Science

Wilckens seems to be always having a good time in school. He never looks as if he were worrying over coming exams or other trifling matters of the same nature. We wish we had as few worries as Wilckens seems to have.

There is a doubt in our minds as to whether he is an optimist or just a pessimist gone wrong.

J. WILENSKI, "Wilenski"

General Science

Wilenski is one of the most conservative chaps we have in the class. When we speak to him he answers us just as if we were gentlemen. Wilenski has always impressed us as being a head waiter. He has the formal manner about him that only a head waiter can affect.

We cannot omit to say, however, that Wilenski is sure there when it comes to getting high marks.

ADOLPH H. ZINK, "Adolph"

General Science

We hate to think of what would happen to Zink if he should fall into an acid. Even if his name is Zink, we can assure you he has a sterling character, and a lot less brass than some other fellows in our class.

Adolph never permits his brain to become tarnished. He believes in brushing his memory up every night, and for that reason he may be found burning the midnight oil early any day somewhere about Forty-second Street and Broadway.

CLASS OF 1926





W.H. STALNUTH
President
General Science '26



C. BOHLENDER
President
Chemistry '26



EDWIN APPEL
President
Electrical Engineering '26



F.H. MILLER
President
Inst. of Technology '26



CHEMISTRY
CLASS OF 1926

The Chemistry Class of 1926

Officers

C. ROHLDER	President
F. THATCHER	Vice-President
V. VON ZWEDL	Secretary-Treasurer
W. LAROSA	Athletic Director

C. U. S. L. Delegates

CARL CARLSON

W. LAROSA

ENTERTAINMENT COMMITTEE

F. THATCHER, Chairman

GEORGE MEYER

CARL CARLSON

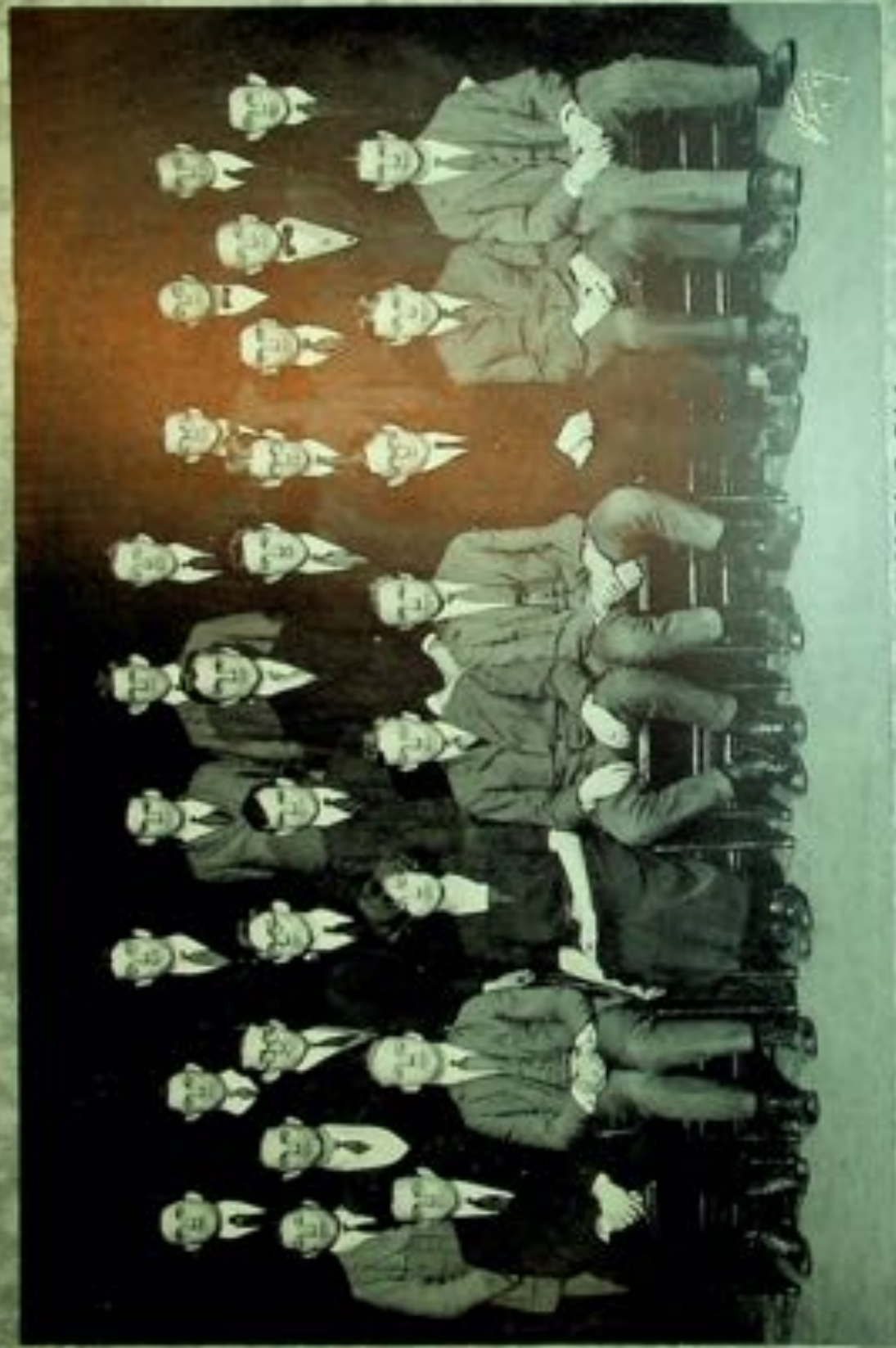
ON October 4, 1920, thirty-five successful students made their appearance in the famed halls of COORUM UNION, in quest of chemical knowledge. At present only nine of the original thirty-five are still with us. We soon became accustomed to the ways of COORUM and early organization resulted in L. V. Elbert being chosen as our first president; G. Smith, vice-president; and F. Thatcher as secretary-treasurer. Being only Freshmen, our first year was a comparatively quiet one. We were represented at the Students League and participated in all school activities. At the end of the year, Section One attended the "Passing Show," and Section Two the performance of "The Champion," with a banquet afterward. At the first Annual Field Day, our only representative, J. Mallie, captured first place in both the quarter-mile and half-mile runs. During the summer a Class reunion was held.

On our return for the second year we found that many had fallen by the wayside. Early organization resulted in the election of F. Thatcher as president, I. Puler, vice-president, and D. Simon as secretary-treasurer. The system of having Class members give short talks on topics of interest at Class meetings was inaugurated and proved to be of great benefit to both the students and the speaker. We were well represented at all school activities and captured several events at the second Annual Field Day. A dinner at Shanley's closed the second year.

Our third year found the majority of our members back again and elections resulted in the selection of C. Rohleder as president, W. Larosa, vice-president, and J. Beall as secretary-treasurer. As usual, we again were very active in all school activities, having two members on the Track Team. A very creditable showing was again made at Field Day. The third year closed with a theatre party and dinner.

The present year, with C. Rohleder as president, F. Thatcher, vice-president, and V. Zwedl as secretary-treasurer, started the Class off with a whim and put us on the active list again. A combined dinner of all the 1926 classes, including the Day Class, was held on December 22, 1925. This created a feeling of closer fellowship and resulted in better co-operation between the classes. At present we are eagerly looking forward to the Basketball Tournament with high expectations.

THE HISTORIAN.



INSTITUTE OF TECHNOLOGY
CLASS OF 1926

Institute of Technology, Class of 1926

Officers

F. H. MILLER.....	President
J. J. WELCH.....	Five-President
W. G. JUDSON.....	Treasurer
H. W. BEBRICK.....	Secretary

Delegates to C. U. S. C.

E. DEL VECCHIO	M. ABRAHAM
D. S. BELL	A. J. CONSTANTINO
B. A. SPIER	W. A. F. RAYMENT

THE mystery of the Day Class of '26 is not what happened in our Class, but in our Class. Sadly depleted in numbers, the few remaining members courageously started the new term. It really took courage, for, aside from the disheartening effect of the curriculum, just one glance at the hawtry crowd in the Fresh Class ought to have made us quake. But were we downhearted? No! We organized and planned for the immediate downfall of the Fresh—into our hands. Picture our sadness and madness when we were informed that Soph-Fresh activities (in the true sense of the word) had been banished, and if any member of that family should dare enter the Halls of Cooper, it would be on pain of death.

We managed to survive the disappointment, but the Fresh and Sophs had to "get together" somehow, so we decided to have a nice friendly football game. We waited for the day with bated breath, and when the fatal Saturday dawned, it decided to be the muddiest day of the fall. The turn out at Van Cortlandt was small. The game was played with seven men on a team, and one referee, helped by numberless small boys. The score showed victory for the Fresh; but it was a moral victory for the Sophs.

This year again found us on our toes on the basketball field. It was a repetition of last year's victories, and the scores show even a more decided supremacy. The score of the Senior game was 23-15; that of the Junior game, 26-11. This is the second year that '26 has been basketball champion of Cooper, and now we are out for a record.

The Day Class joined with the Night classes in a banquet at Shanley's, which was such a great success that it will in all probability become an annual affair. Professor Euders acted as toastmaster, and the president of each group spoke in tones which showed they were men of no small experience. After much food, and much more singing, the evening was brought to a very successful close.

We feel that our Class as a whole is a perfect unit. We have our prodigy, our scrapper, our wise-cracker, our dumbbell, and our clown—each member, in fact, is distinguished by some outstanding characteristic. We hope that the next year finds all of us still seeking knowledge in the halls of Cooper.

THE HISTORIAN.



ELECTRICAL ENGINEERING
CLASS OF 1926

Electrical Engineering, Class of 1926

Officers

IRVIN APPEL.....	President
KENNETH C. BACKETT.....	Vice-President
WILLIAM A. CROCHLEY.....	Treasurer
GEORGE GUTTRON.....	Secretary

Delegates to C. E. S. L.

IRVIN APPEL

FRANK X. HAYES

Delegates to Student Branch A. I. E. E.

KENNETH C. BACKETT

Chairmen of Committees

RICHARD ENGELKE.....	Entertainment
CHARLES A. HAYES.....	Interclass Business
GEORGE APPEL.....	Cable
MAX HONOWITZ.....	Athletic
CHARLES BROWN.....	Technical

RAY pause, profile reader, and gaze for a moment on the benign physiognomies photographed on the left. No, no, they are not resident students of our sister university at Blackwell's Island, but truly come under the world-besting title "Members of E. E. '26."

Appel, chairman of this outfit, was considered, intellectually, to be *se par alto*, '26, having read "Calculus made easy," he descended to the level occupied by an other headster. Assistant Chairman Backett is a working ex-officio. Extraordinary, isn't it?

The negligence of the Class is apparent when they elected Crochley, a radio bug, as chief goader of our vile lads. A radio bug, fellow convicts, is worse than that specie "drunkard," as called by our aristocratician operators.

Our Secretary, Guttron, is a swimmer and the holder of only such records as he takes at class meetings.

A man to be representative of '26 would be a pot pourri. Its constituents include a composer, hockey player, football player, notator, basketball dinger, politician, reporters and what not.

The Christmas recess saw the combined '26 classes holding a banquet, which of its kind has never been more successful, laying a solid and fruitful foundation for the affiliation and co-operation among the various classes so necessary especially in the Junior and Senior years. Prof. Enders presided.

A team from this class proved to be not of varsity calibre, being eliminated by the architects in their first flurry. Brown, Honowitz, Stann, Feldstein and Gary were the material. However, the purpose of this class tournament was to bring the classes in closer contact. The result was accomplished, two beakstreak eyes and a sore knee.

This year, academically, the "bridge of asses" of the course, finds more intense application to study and a darkness in extra-activity. To be or not to be regretted. But no play makes proverbial Jahany much like sugar, no edge. And we hate darkness.

With the oncoming tide of March, approaches the Class annual blowout. If previous performances are worthy press agents, "nuff said!"

Reviewing this hectic year with its eads, its errors, relative and maximum and absolute, we feel that much has been overcome in the advance to the final goal. In fact, turning our backs to the past and blithely striving to conceive the future—say listen here, you gods and the rest of you, we were fooling hitherto, this Class is the oddest, the comest class of all the classes hitherto the silvery beams of the complacent and cherry lads and furthermore, if you don't listen now, you will have to when under the nomenclature of Juniors, we will dash out a brain child which will be the oddest Class of 1925.



GENERAL SCIENCE
CLASS of 1926

General Science, Class of 1926

Officers

W. H. STALLHUTH.....	<i>President</i>
A. J. MOONEY.....	<i>Vice-President</i>
A. DE LUNA.....	<i>Treasurer</i>
V. E. FIERRO.....	<i>Secretary</i>

C. U. S. L. Delegates

<i>Section I</i>	<i>Section II</i>
A. DE LUNA	A. J. MOONEY
<i>Section III</i>	
F. C. RYDER	C. GRUTSER

THE General Science Class of '26 began its third year with the enthusiasm and school spirit which has characterized it from the beginning. The Class organization was formed immediately after the opening of the Freshman year. The Class spirit quickly manifested itself in the form of several very successful Class functions.

During the second year the same spirit was predominant. The Class had the honor of claiming as their members several of the school's most prominent athletes. Their performances reflected distinct credit upon their Class as well as their school.

The unusually large amount of preparation which the studies of the year demand leaves the members of the Class less time for class activities than they have heretofore enjoyed.

For this reason they decided to reduce their social gatherings in order that the high standard of scholarship which has always been maintained shall not suffer. Yet, in spite of this fact, they still found time to put a fighting basketball team in the interclass tournament which, in their first game, beat the Seniors in two extra periods of play.

THE HISTORIAN.



ARCHITECTURE
CLASS of 1926

Architecture, Class of 1926

ALBERT ARLONGANGA.....President

ADOLPH G. SCHWESIGARD.....Vice-President

ARTHUR MOSKOWITZ.....Secretary-Treasurer

Delegates to C. U. S. L.

A. ARLONGANGA

MATTHEW F. COLLA

IRVING BECK

BENJAMIN RAPP

SITTING on the Rock of Time, Old Father Cooper did once again open wide, with that solemn majestic air peculiar to men of wise and lofty demeanor, his Book of Records. With quill in hand he turned to a page void of entries and wrote thereon the following legend: Architecture, Class of '26.

Thus did the infancy of a new era in the life of Cooper Union dawn. With a group of approximately 150 students the new class began their work in the Fall of 1922. This class listed men from all stages of life—from high school graduates to mechanics. As was natural the students were unaccustomed to this mode of study, but, due to the attentive and kind tuition of our protectors, we soon began to understand and to show progress.

The monotony of study was broken now and then by a sally into the different activities of the school. Here the sturdy athlete has the opportunity of trying his prowess at basketball, football, swimming and divers sports. In this manner the term ended all too speedily.

The next year, that is to say, in the Fall of 1923, the Class of '26 returned to its studies, sadly depleted from their proud 150 to a scant 90. Nevertheless the spirit, instead of decreasing proportionately, took tremendous leaps ahead. Before the term was very old we held our first meeting, electing our officers and delegates, and have since settled down into an organized attempt to work for our Alma Mater and to indulge in all the school activities again this year. Already a basketball team has been chosen to represent '26 in the interclass contest, and we feel assured the team will make a creditable showing. With this spirit predominating we can reasonably expect ultimate success.

THE HISTORIAN.

CLASS OF 1927





CLIFFORD KAISER
President
Chemistry '27



JOS. STEINBERG
President
Architecture '27



D. M. LENT
President
Institute Technology '27



FRED KASTEL
President
General Science '27



ROST ENECKE
President
Electrical Engineering '27



CHEMISTRY
CLASS OF 1927

Chemistry, Class of 1927

Officers

CLIFFORD F. KAHER.....	President
F. J. BANISCH.....	Vice-President
AUGUST MUEBER.....	Secretary-Treasurer

C. U. S. L. Delegates

HERMAN SATZ

MICHAEL MOELNER

Entertainment Committee

JOSEPH KOUTENSKY, Chairman

A. MARTEL

JOSEPH CONNOLLY

Banquet Committee

JOHN M. CEGLOWSKI, Committee of One

IN October, 1921, thirty enthusiastic aspirants for the B.S. degree in Chemistry were admitted into the portals of Cooper. The officers for the year were: J. F. Connolly, President; Edw. Treadway, Vice-President; J. M. Ceglowski, Secretary-Treasurer. The year was rounded out by a dinner at Keene's Chop House.

The beginning of the second year found the Class with only fifteen of the original members, although the enrollment of the Class was again thirty. The officers elected for the year were: John M. Ceglowski, President; Julius Yourman, Vice-President; and David Simon, Secretary-Treasurer. After an eventful year the Class celebrated by holding a dinner at Port Arthur.

At the beginning of the third year, the Class enrollment was only thirteen, nine of whom were of the original thirty. The Class spirit, however, has been above the average. All members of the Class are Paid-in-Full subscribers to the *Pioneer*, members of the Athletic Organization, and all interested are in the athletic activities of their Alma Mater.

THE HISTORIAN.



INSTITUTE OF TECHNOLOGY
CLASS OF 1927

Institute of Technology, Class of 1927

Officers

DONALD M. LENT.....	President
JOHN B. O'BRIEN.....	Vice-President
MARSHALL F. ACKEN.....	Treasurer
W. H. YOUNG.....	Secretary
CHAR. JOHNSON.....	Historian

Delegates to C. U. S. L.

DONALD M. LENT	JOHN B. O'BRIEN
MARSHALL F. ACKEN	CHAR. JOHNSON
WILLIAM HOLMES	

FOR the sixty-fourth time Cooper Union has welcomed into its student body a new Freshman class. The members of the Class have been for weeks striving to acquire efficiency in the execution of their work at Cooper Union, in preparation for their careers.

Soon after the studies commenced, the Class officers and delegates were elected. Two delegates from each of the three sections were chosen as representatives to the Students' Council, and from these the officers were also elected.

Two or three weeks later the upper classmen proved their interest in the entering class by giving them a much appreciated entertainment. It was at this time that the Freshmen were acquainted with the college traditions.

Because of the fact that most of the students live outside the city, it has been impossible to hold many Class functions. Nevertheless, it is certain the annual Freshman Dance, which is to come, will be a brilliant affair.

The Freshmen have shown much interest in the various clubs and athletic games. An interclass football game proved the youngsters too much for the Sophs, and field day will show more fast work on their part.

THE HISTORIAN.



ELECTRICAL ENGINEERING
CLASS OF 1927

Electrical Engineering, Class of 1927

Officers

ROBERT EMECKE.....	<i>President</i>
HENRY HARRIS.....	<i>Vice-President</i>
LEWIS GROPER.....	<i>Treasurer</i>
PETER BRUCE.....	<i>Secretary</i>

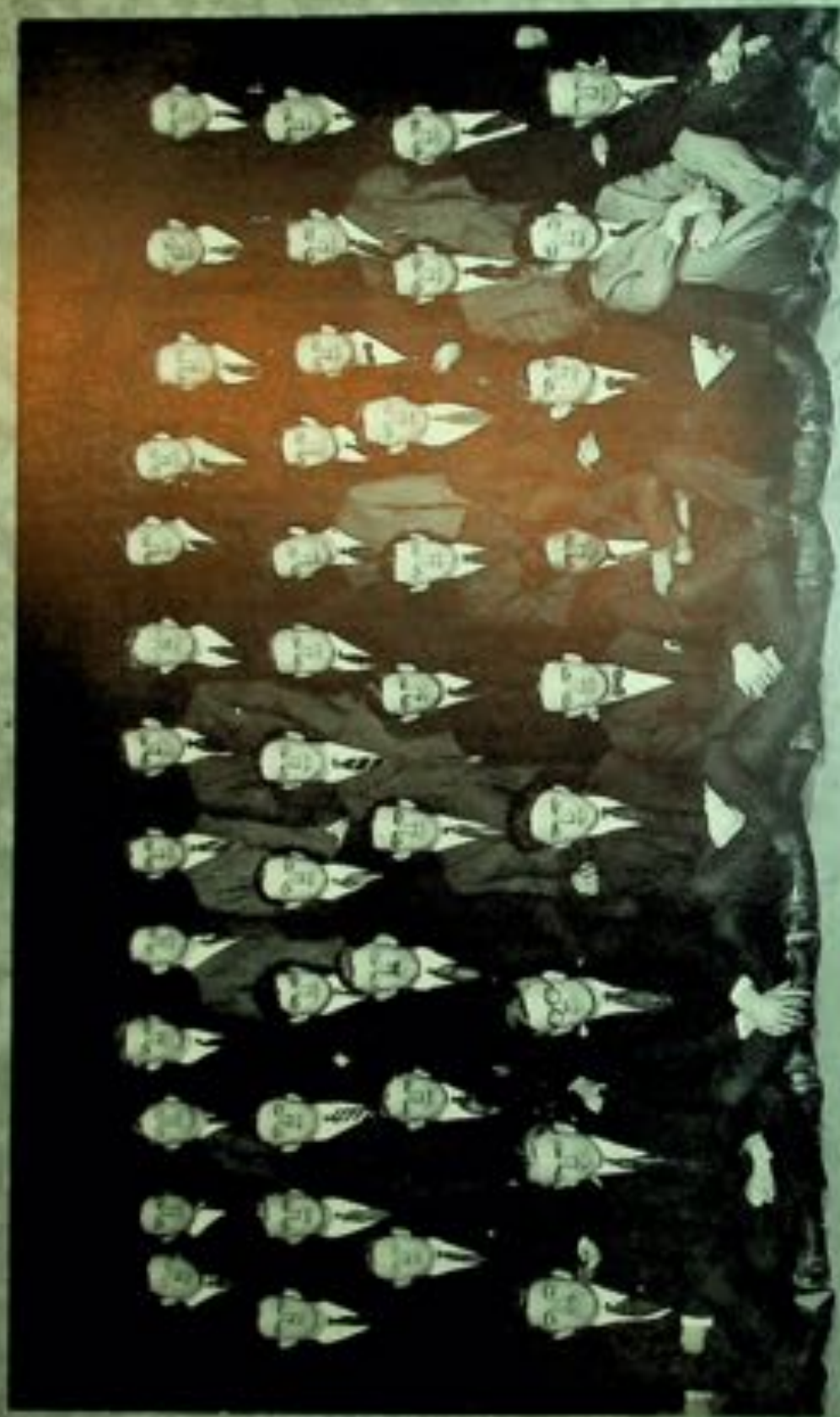
HISTORY tells us that during the latter part of the year 1922 a motley aggregation of some one hundred and twenty students cast themselves into the melting pot of Knowledge, Cooper Union, and within a short time these prospective electrical engineers were fused into a closely associated and seemingly indestructible group known as "The Electrical Engineering Class of 1927." But, "The chain is no stronger than its weakest link," and as we now know, due to our excellent knowledge of mechanics (?), the stress due to the exams proved too great for the chain to bear and the links were somewhat scattered at the close of the first year.

However, that year will not be forgotten in the sporting world, due to the efforts of our spartan heroes, Carthan, Clancy and Cornish. The redoubtable pair, Clancy and Cornish, have survived to date, and during the past term have again made the game interesting for our opponents on the gridiron. Bruce also made a fine showing upon the Class basketball team. Neither must we forget Heller and his work upon the football team, nor Miller, who, during the past term, did his stuff for the Junior Varsity Basketball Team. The renowned football warriors are also "Letter" men.

All in all our scholastic ability is about on a par with that shown in last year's performance. We leave you, kind reader, to judge for yourself what this may mean, and inasmuch as there are more pleasant topics about which to speak, be it known that on March first we Sophs of the E. E. course had one grand time in compensation for our mental privations during the past year. A visit to the Selwyn Theatre to honor "Mr. Battling Butler" and then a banquet at the "Geneva" was the projected entertainment. Our guests were Messrs. Goetz, Riedel, Pickett, Puller and Tamsala. Without exception they proved as entertaining as they had been instructive during the past semester.

This event terminated our social activities for the Class year, and it certainly proved a happy and successful finale for the second term of E. E. '27.

THE HISTORIAN.



GENERAL SCIENCE
CLASS of 1927

General Science, Class of 1927

Officers

FRED KATTEL.....	<i>President</i>
JOSEPH REINHARDT.....	<i>Vice-President</i>
SAMUEL KAPELSOLN.....	<i>Treasurer</i>
JOSEPH BASHY.....	<i>Secretary</i>

OUR ranks are sadly depleted. One by one the stragglers have fallen by the wayside. Only a few remain who have not succumbed to the iniquitous pitfalls of our multitudinous studies. In addition they are sadly lacking in vim and vigor. The vaulting ambition of these embryonic engineers and their devotion to the shrine of knowledge (?) leaves them strangely cold to the appeals and earnest supplications of the faithful few. In spite of the herculean endeavors of the hierarchy there is a noticeable lack of enthusiasm toward any project involving an expenditure of time or money. It seems as though it were a case of, be everything or do nothing, with some of the members.

Nevertheless, something has been accomplished. The Class has attained a membership of about 80 per cent. in the A. O. Meetings were attended by an enthusiastic few, and the Second Annual Dinner, which was surprisingly successful, was held on March first. It was attended by a goodly number, including three members of the Faculty.

The Class came out strong for athletics, and although not successful in every instance, its members tried out for every possible team. The star of the Basketball Team is none other than our own Sugar, Spark Plug (Segun); on the Football Team we find Reinhardt and Lawrence. The Track Team also claims several members: Kid Levin, Lightning Kapelsoln, and Lipatick Lipschitz.

The president of the C. U. S. L. was deemed worthy of holding the vice-presidency of the class, as—

Naif said! Not for us to further chronicle our own conquests or to boast.

Plans are being made for a farewell party, for we fear the horrors of Calculus. Before the dolorful results of the exams are handed down by ye most high profs, we needs must meet and make merry, for on the morrow . . . ?

THE HISTORIAN.



ARCHITECTURE
CLASS OF 1927

Architecture, Class of 1927

Officers

J. STEINBERG.....	President
J. McCABE.....	Vice-President
M. BRUGNON.....	Secretary-Treasurer

Delegates to C. U. S. L.

J. McCABE	J. GREYER
R. HILK	G. KRAUS
J. STEINBERG	W. SPITFORM
J. SAYR	

ON a September evening in 1923 there gathered at Cooper Union Auditorium over four hundred men, to take an intelligence test for entrance into the Architectural classes. All entered more or less nervously, feeling strange among unfamiliar faces. Here and there some were discussing the nature of the coming examination, as they were ignorant of what the test would be. Of the examination itself nothing much need be said; some found it quite difficult, others simple.

At the close of the test, after the papers had been collected and the embryonic Architects dismissed, a tumultuous uproar filled the room, nearly every one engaging in conversation. Those who had felt formal at the beginning were now freely expressing their opinions, while slowly departing.

Those who were successful in passing the test were rewarded with a notice of admission to Cooper Union. Thus, with the first attendance, began the Class of '27. The first evening was devoted to outlining the year's work; the second the actual beginning of our work. Our Class, being no exception to the rule, harbors some very interesting characters. The hard worker, who does not stop to argue politics or expound some theory in geometry, but who is always advanced in his problems and willing to help others if he can. Such a man deserves praise, but please consider that no names are given so as to avoid publicity. And then there is the man who desires fun but doesn't go so far to annoy anyone. One could reasonably say he is there to keep the class in good humor. And the unmethodical who is always trying but never succeeding. Next to him is the elocutionist who would do better by taking more copy and talking less.

Our delegates to the Students' League were soon chosen and through them we were apprised of the school's activities and coming events, such as meetings, social affairs, etc.

Our organization meeting was held February 8, 1924, and our officers elected. Being newly organized we have been unable to do much planning, but let us hope that time will help us to assume the responsibilities necessary for us to "carry on" properly.

THE HISTORIAN.

CLASS OF 1928





ROBERT W. CROSSON
President
General Science '28



LEONARD FIERICH
President
Chemistry '28



JOE A. JORDAN
President
Physical Science '28



CHEMISTRY
CLASS of 1928

Chemistry, Class of 1928

Officers

LEONARD KERRICH.....	<i>President</i>
T. H. SCHUBCKE.....	<i>Vice-President</i>
FRED W. K. MILLER.....	<i>Secretary-Treasurer</i>

Delegates to C. U. S. L.

LEONARD KERRICH

V. O. MATTHEWSON

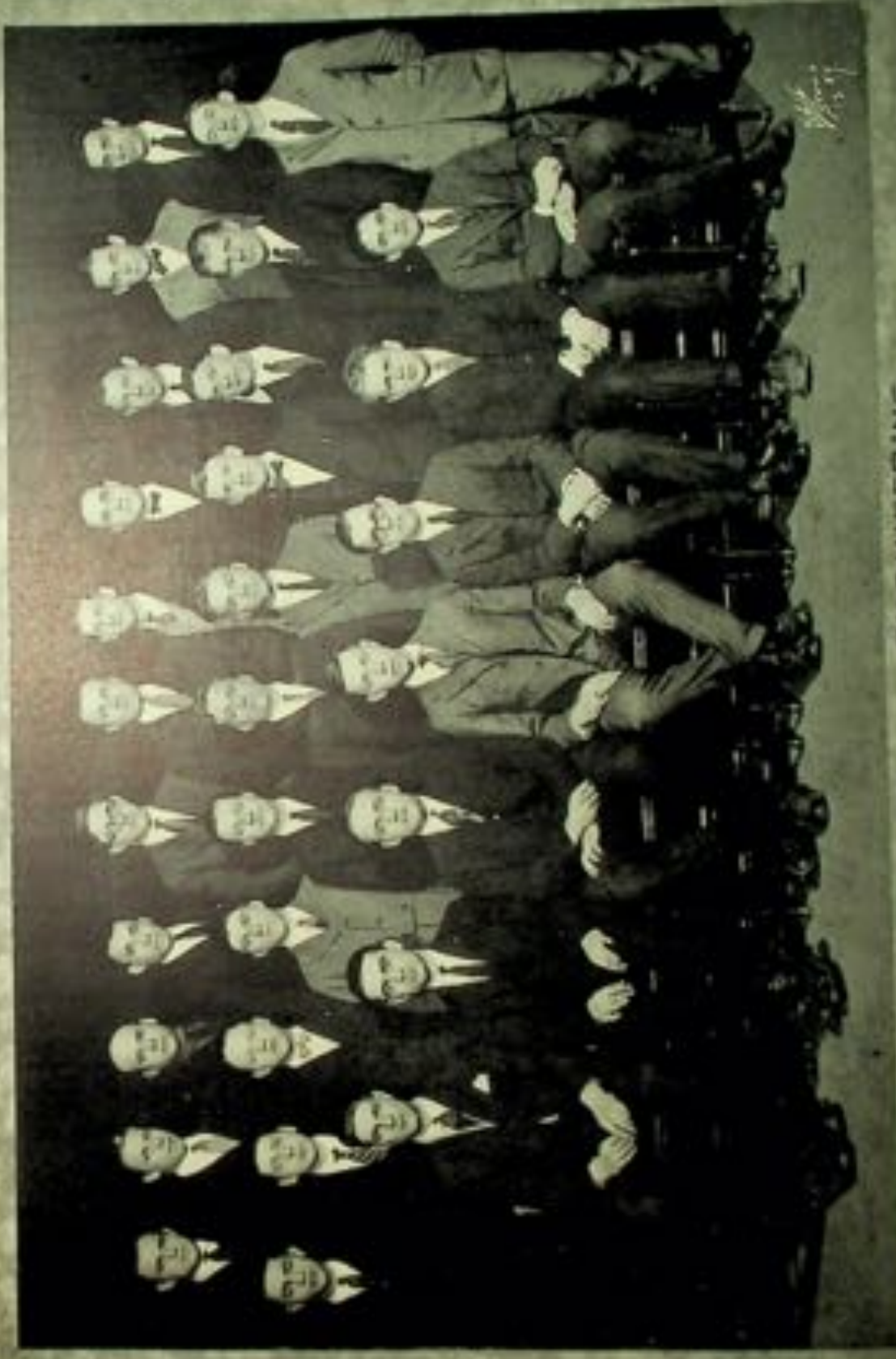
THE Class of Chemistry, 1928, started upon its career with about sixty members, but due to the vicissitudes of a long and hard winter, and the well meant but disastrous efforts of the Faculty, this number was rapidly reduced to a mere twenty-five.

At the end of the first year the Class held a theater party which turned out to be a success. The Class has not enjoyed many social events as yet, but the consensus of opinion is that the primary object of our attendance at Cooper is to learn to be a chemist, or at least attempt to be one even if we have to hide behind a beard to get away with it.

The Class has obtained the use of a Gym from the city for basketball practice, but the members being widely distributed, find it difficult to attend practice.

In the second year of our existence the Class was better acquainted and many friendships formed, so that the remainder of our sojourn promises to be a pleasant one.

THE HISTORIAN.



ELECTRICAL ENGINEERING
CLASS OF 1928

Electrical Engineering, Class of 1928

Officers

J. A. JORDAN.....	<i>President</i>
J. KENNEDY.....	<i>Vice-President</i>
R. MACDONALD.....	<i>Secretary</i>
H. S. MARTIN.....	<i>Treasurer</i>

ON October 4, 1925, one hundred and two men, who thought themselves able to bear the burden of five years' study, met for the first time.

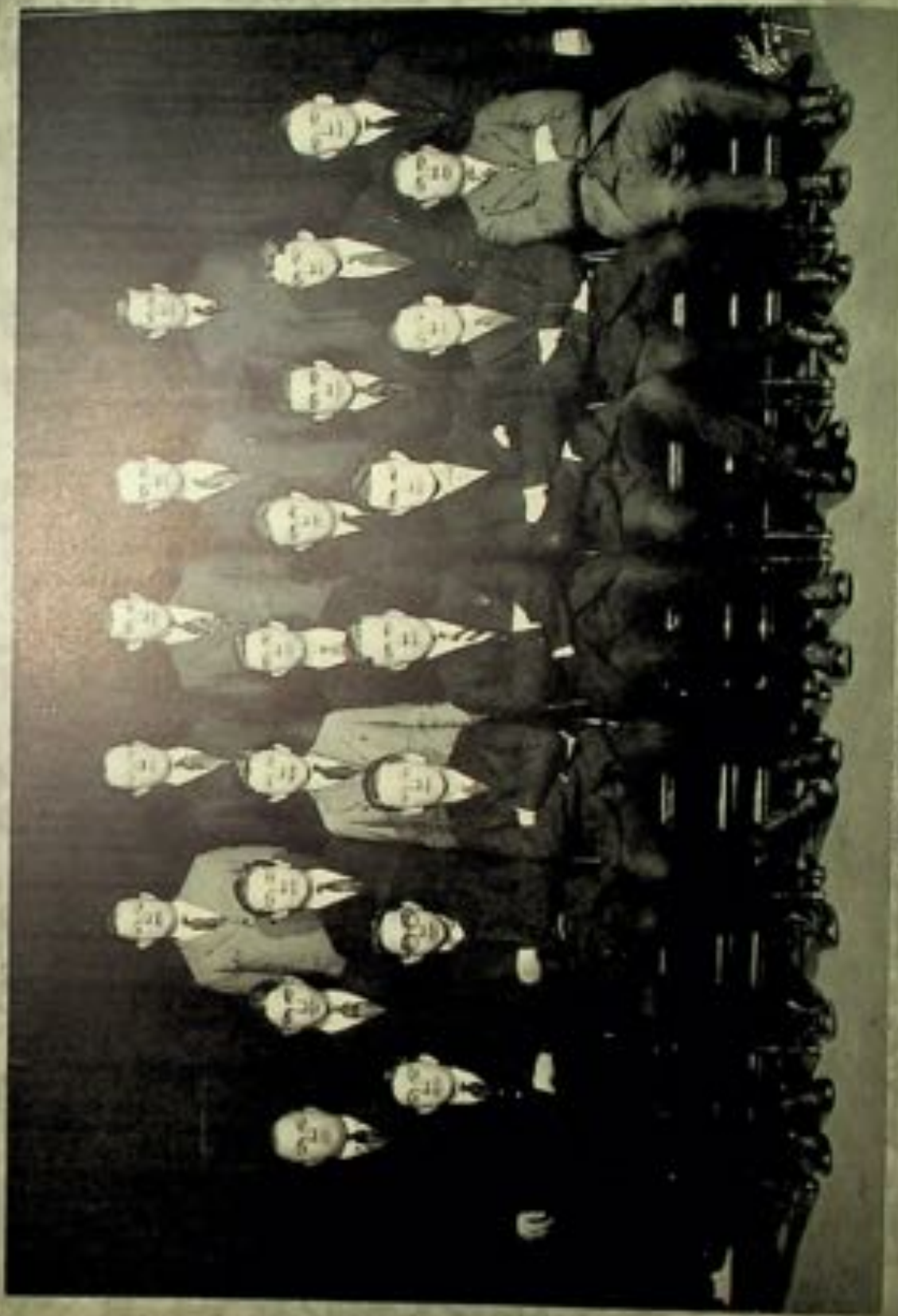
Some, however, overestimated their ability, and before long were forced to abandon the idea of becoming a second Steinmetz.

It was not until late in the season that it was possible to bring about the organization of the Class. Since this has been effected it is assured that a firm foundation will be laid down, upon which the activities of the future may be built.

After the work of organization had been completed, the officers chosen, and the constitution committee started on its work, the real work of the Class was begun.

Up to the present writing the Class has not entered into any social activities, but with the spirit shown by the members, it is certain that E. E. '28 will play an important part in making history for Cooper Union.

THE HISTORIAN.



GENERAL SCIENCE
CLASS of 1926

General Science, Class of 1928

Officers

ROBERT E. GOSMAN.....	President
HUGH C. CLARK.....	Vice-President
SAMUEL J. BARKER.....	Secretary
WILLIAM T. ATKINS.....	Treasurer

JUST as summer brilliance slowly blended into the golden haze of autumn, many men embarked for a long voyage of five years on the tempestuous sea of General Science, flying the battle-scarred colors of Cooper. After having passed through all the preliminaries successfully, the Class experienced their first thrill, in being hailed as men of Cooper. However, it must be confessed that they were not overlooked by the various emotions of awe and fear which beset the student in his initial encounter on strange grounds.

At the helm of our craft guiding us over the stormy seas and paths, we have a most renowned and eminent group of men: expounding to us the intricacies and mysteries of Algebra and Geometry, we have the illustrious Professor McLean; leading us from the depths of mathematical ignorance into the heights of trigonometrical excellence, we have the inimitable Professor Gardner; directing our exploits in Chemistry and dragging forth its secrets with incomparable courage is the far-famed Professor Enders. Aside from Chemistry he has given us many a little bit of fatherly advice which bolstered up our courage wonderfully; projecting his valiant and remarkable knowledge of the art of graphic representation of the engineering language (mechanical drawing), Professor Langsath.

With these pilots directing us we have the crews of educational guidance, and undoubtedly by mutual cooperation we will reach the apex of engineering success and give to the world feats and accomplishments that will tower as monuments to the greatness of the Class of '28.

Now we had become fully acclimated to our environments the first port on our long cruise fully have into sight, and all of the little coincidences that have that inexplicable power of binding a class more strongly with fetters of good fellowship, sink into evanescent oblivion and leave to us pleasant reminiscences of the natal year of the Class of '28.

KNOCKS AND BOWNS

Selverberg, the little fat boy, is the class "Comedian."

Is our friend Spuler, we have a real "Valentin Schick." He's got "de last."

Schroeder—

Charlie stood in the corridor,

And didn't hear the bell.

And when he got to his Algebra Class,

The teacher gave him—extra homework.

Schulfeld is one of our "gifted" boys, having the gift of gab.

Steinfeld asked Schick (our six-footer) if he liked cabbages; little Schick blushed furiously and spilled some Hydrogen Peroxide (H_2O_2).

Smith and Tannen, Mike and Ike they look alike, also known as the "Uncle's Bunch" bring hailing from Jersey where straight lines are recognized as straight.

Canardie Tessler, our rheumatic runner, would be worth while added to our track team. When he isn't sleeping here, he's sleeping at home. What we don't understand is why he's taking up G. S.; he's a born lawyer.

One of the "Gold Dust" twins, A. Thalheim.

Seven flights of stairs seem to affect Saffon, being a former cowboy.

So far as the Class is concerned we are a conscientious lot, being naturally tired and sleepy.

Van Nostrand, the giant from "The Valley of Giants" Staten Island. He states it is tough riding in Jitneys.

Solid Geometry isn't solid to Van Name.

Van Rosenberg—to him wasson and Wednesday both begin with a "wabblyson."

We have the class minister in the great

personage, C. A. Veil.

Weber, Cooper Alumnus, came back with

his thirst for knowledge, drinking up solid geometry (H_2O).

We wonder if Weintraut's name was ever "Beer Saloon."

"Better late than never" seems to be Wolfson's motto.

Wissel and Weising, the "Siamese Twins."

Weisburg probably wrote "Sittin' in the Corner."

Forbes is our leading orator.

Phillips Savino and dump him out.

Ross, afraid of catching cold, grew a moustache.

Shipley is one of our most enthusiastic class workers, being newsboy (*Pioneer*) and Class delegate.

Slater is a "Westworth" fan.

Frank Senger, the class husky and Cooper fullback, kept away from all opposition by standing still.

THE HISTORIAN.



CHEMISTRY
CLASS OF 1929

Chemistry, Class of 1929

Officers

T. J. LACKNER.....	President
F. ROEHEN.....	Vice-President
M. WITT.....	Secretary-Treasurer

Delegates to C. U. S. L.

J. BACOTTI	E. L. CAREY
M. WITT	T. J. LACKNER

Special Committee

S. MILLER, Chairman

P. PETRICK

F. ROEHEN

ONE autumn evening, in the latter half of the year of our Lord, nineteen hundred and twenty-three, a bunch of unsophisticated bipeds of both sexes wandered to these famous halls of learning to drink at the fountain of knowledge. Here's where the story begins. Out of the large number of applicants only sixty-three were hardy enough to withstand the shock of the Intelligence examination and to pass the gauntlet. Surely these noble adventurers should be crowned with laurel wreaths and be ranked among the heroes sitting at Valhalla.

Let us proceed, however, and become serious. From now on we can compare the general progress of the "Class" to the gradual evolution of the present system. At first the stage of general chaos, disorganization and absolute individualism, and then organization. Gradually there arises the idea of coöperation, which is later put into practice through the efforts of the "strong men" of the Class.

The first organization meeting was held on the evening of October 24, 1923. At this rather stormy meeting, Mr. John Donnelly was chosen as chief officer of the Class, while Mr. Eric Johnson was elected as vice-president. Miss Witt, one of the prime movers in the Class, was entrusted with the secretarial and financial offices.

There have been quite a few changes in the presidency and vice-presidency, but for all that, all has been prosperous.

There is only one protest, however, that we, the Chemistry Class of '29 wish to register, and that is: that we were permitted to hold meetings in the building only once a month.

THE HISTORIAN.



RESUME OF THE INTERCLASS BASKETBALL TOURNAMENT

UNDER the auspices of the Interclass Basketball Committee of the Students' League, headed by W. F. Vieth as chairman, an interclass basketball tournament was staged during the later weeks of the basketball season. The competition which resulted was very keen, and most of the games were thrillers, hotly contested throughout.

Every Sunday morning during the tournament, members of class teams, according to schedule, traveled to the Stayveant gymnasium to defend their class honors, and in the end, after a grueling six weeks in which twelve teams were eliminated, the team representing the General Science Class of '24, came out on top—champions of the night college.

The tournament was a huge success in spite of its being marred by several very properly protested games during the first few weeks. As a reward for their endeavors the members of the winning quintet will be awarded a befitting insignia at the final meeting of the Students' League.

Space and time prevent a resume of all the games played, interesting as accounts of them would be. Eliminations continued until but four teams remained. These were E. E. '24, Arch. '26, Chem. '26 and G. S. '24. In the first of the semi-finals the latter two teams met, and in the other the former pair met. G. S. '24 eliminated Chem. '26, and Arch. '26 was victorious over E. E. '24. This left the architects and scientists to battle it out in the finals, and battle they did. After the regulation playing periods the score was a tie at 18-18. With but thirty seconds to go for the end of the second half, Soares, of the Architects' team, the disunitive forward, who incidentally is a member of the Junior Varsity, caged a long shot from mid-field, which necessitated the playing of an extra period. The rest between periods apparently benefited the engineers more than it did the architects, for in the first three minutes of the period they piled up a lead too big for their game opponents to overcome. In the extra period, Vieth (another Junior Varsity man), Katcher and Gilligan each caged field baskets, and Duncanson dropped in a foul shot. The best the architects could do was a field goal and a foul shot by Beattie, leaving the final score 25-21 in favor of G. S. '24.

The line-up for the final and deciding game of the contest was as follows:

<i>Architecture, '26</i>		<i>General Science, '24</i>
Soares	R. F.	L. Vieth (Capt.)
Beattie (Capt.)	L. F.	Abramson
Poss	C.	Duncanson
Wise	L. G.	Katcher
Latarius	R. G.	Gilligan

Vieth, Katcher and Duncanson were high scorers for the victors with five, three and two field baskets to their credit, respectively. Gilligan and Abramson each caging one. Beattie and Soares were the point-getters for the losers, the former scoring four baskets and three goals from the foul line and the latter five baskets.

A few words should be said about those teams who fought their way to the semi-finals. In the first of these G. S. '24 vanquished Chem. '26. The chemists put up a stiff fight, but the brilliant work of the General Science men was too much for them. The final count was 18-13. Vieth led the scoring for the Engineers, with five baskets and a foul goal, while Hudrick starred for the losers with three baskets. The line-up of the General Science team was the same as that which defeated the Arch. '26 in the finals. Chem. '26 was supported by Hershberg and Hudrick as forwards, Breslow as centre, and Scheller and Freilich as guards.

In the other semi-final games played, the fast team of Arch. '26 dangled E. E. '24 with their speed and came out on the long end of a 20-10 score. Beattie and Soares were the main point-getters for their team, while the scoring of the electrical engineers were evenly distributed among the team. Their line-up consisted of Wieland and Carlson as forwards, W. Vieth as centre, and Eliason and Troster as guards. Failure to take advantage of numerous opportunities lost the game for E. E. '24.

The Interclass Basketball Tournament this year was not the first of its kind but it was the first systematically conducted one held. It might be added that two years ago the same G. S. '24 team won the final game in the series.

In closing let it be said that the tournament in the Night College was a success in every way, and it is hoped that such activities will be continued in the future.

The Cooper Union General Science Alumni Association

THE Cooper Union General Science Alumni Association is the time-honored fraternal organization of the Cooper Union. It had its origin in 1877—thirteen years after the first class, numbering five, was graduated in 1864, from what was then known as the Scientific Course. It was from among these graduating classes—a few members each year for thirteen years—that the first Cooper Union Alumni Association was formed. They were prompted by a desire to "carry on" the work begun in the Cooper Union, during the life of its illustrious founder, Peter Cooper. They aimed to create an organization that would take upon itself the privilege and duty of keeping alive the honored traditions of the Cooper Union.

In addition to the active membership, which consisted of the graduates of the Scientific Course, there were also associate members, those who had attended three years of the Scientific Course or their equivalent. The Association gradually grew in membership and was incorporated in 1882. By inviting the graduating class of each year to its annual dinner, which usually took place in the early part of June after commencement, it secured most of the graduates as members. Nominal dues were set at two dollars per year.

The Association continued to grow for fifteen years into an organization increasing in numbers and activity. Annual Dinners were held on Founder's Day under the auspices of the Association. Monthly meetings with instructive addresses and lectures were held during the school term. The Association also established its own library and formed the Cooper Union Glee Club which flourished for a few years. As the school grew and new departments were organized there naturally resulted therefrom groups of graduates which formed separate and disconnected alumni associations.

About the year 1896, at the Annual Dinner, this development was discussed and the suggestion made that a new alumni association be formed to include the graduates, not only of the General Science Night School, but those of all the departments. In order to encourage this idea the Cooper Union Alumni Association relinquished its name, held for many years, and gave it to the general organization. The original organization took for itself a new name, that of the Cooper Union General Science Alumni Association, by which it has since been known.

The Cooper Union Alumni Association, with dues of one dollar per year, was launched with enthusiasm. But, as its dues were one-half of the older body's, a rivalry grew up, which was exactly the opposite of the hoped-for result. With the passing of years the Association became more or less dormant, as likewise did the others, until in 1916 most of the departmental bodies were only names and the new organization born in order to bind these men of the Cooper Union in common fraternity was little better. This condition continued, much to the dismay of those who realized what was happening.

This state of affairs was seriously discussed and some way sought to remedy it, but it was not until April, 1918, at a regular meeting of the Cooper Union Alumni Association, that it was determined to remodel and rename the Association under a new constitution. Under this plan the proposed organization was to be a truly representative body having no general membership and therefore not rivaling the departmental alumni associations in an effort to get numbers.

The plan was to have this new body simply a limited committee representing all of the departmental associations and consisting ultimately of elected delegates from each of the departmental alumni societies. In this way the Alumni Federation of Cooper Union came into existence. At the same time the Cooper Union General Science Alumni Association took on new life after some years of inactivity and Mr. Henry Kaltenbach, who had been its last regular president, continued in office until 1920. Mr. Wm. F. Hennessey was then elected president for 1920 to 1921, followed by Mr. Henry D. Williams as president for 1921 to 1922. At present Mr. Chas. H. J. Dug of the Class of '89 is in the chair.

Federated Alumni Societies of Cooper Union

The following is a brief outline of the history of this organization:

Early in 1923, Professor C. H. Richards, then Director of Cooper Union, while discussing various matters with Mr. L. Chas. Mamola, the president of the Cooper Union Chemical Society, inquired if it were not possible for the Chemical Society to join the Cooper Union Alumni Federation. This organization had been inactive for some time, and it was hoped that with the aid of the Chemical Society it could be revived. However, the Executive Committee of the Chemical Society, after discussing the matter from many angles, decided that it would be wiser and easier to start with a new organization, rather than try to rejuvenate one that was for all practical purposes extinct. The Chemical Society then advised Director Richards that it would undertake the task with the understanding that he, the Faculty, and the trustees of Cooper Union would favor the formation of this alumni organization and that they would stand solidly behind the new enterprise.

Accordingly the President of the Chemical Society sent out invitations to the officers of every alumni society of Cooper Union to discuss plans for the formation of an organization which would act in unison on all matters concerning Cooper and its alumni which might require concerted action. A preliminary organization was formed, consisting of the following Cooper Union societies: The Architectural Alumni Association, Day Alumni Association, Chemical Society, Electrical Engineering and General Science Alumni.

This preliminary association held several meetings, at which all were made acquainted with the work previously done, and at which mutual endeavor and assistance were pledged. It was then decided to call the organization the "Federated Alumni Societies of Cooper Union," since this best describes the nature of the organization. Each alumni society retains its identity, but the societies are federated together for common action where such action is desired. This federation is composed of four members from each alumni society, including in each case the president and secretary.

This committee then decided to arrange for a banquet of all the alumni, to be held on Founder's Day. The committee met almost every week for the entire year, and worked hard on every detail concerning the dinner. The banquet was held at the Aldine Club, 200 Fifth Avenue, New York City, and was a most impressive event. Over four hundred Cooper men attended and thoroughly enjoyed the dinner, as well as interesting and enlightening speeches by nationally prominent men.

It was perhaps the largest alumni gathering ever held. The committee feels that the results were wonderfully encouraging, and that as its maiden undertaking, the affair was without doubt a huge success.

The committee is composed of the following:

Cooper Union Architectural Alumni Association: W. H. Wagner, President; Howard I. Cornell, M. W. Del Gaudio, James Kraus.

Cooper Union General Science Alumni Society: J. I. Sogarnan, President; M. Hoerer, Secretary; S. Sammarco, G. J. Harris.

Cooper Union Day Alumni Association: J. M. Welsh, President; H. A. Fishman, Secretary; J. A. Conklin, C. F. Jellen.

Cooper Union Chemical Society: L. Chas. Mamola, President; W. H. Peacock, Secretary; H. C. Enders, Thomas McKenna.

Cooper Union Electrical Engineering Alumni: W. K. Bach, President; H. Miller, W. Stumpf, A. P. Neuburger.

The Cooper Union Chemical Society

Officers

L. CHAR. MARSDEN.....	President
THOMAS McKENNA.....	Vice-President
W. H. PRADDER.....	Secretary
W. A. PETERSON.....	Treasurer

THE Cooper Union Chemical Society is the Alumni body of the Chemistry department, and admits undergraduates from the fifth and sixth years to associate membership. The keen interest shown by students in the other classes will probably result in the formation of a junior organization during the coming year.

The monthly meetings are notable for the high quality of the scientific papers presented. These are followed by informal discussion—not always scientific—and refreshments. One of the innovations of the past year was the holding of several joint meetings with the classes of the Chemistry department. This was made possible by the splendid coöperation of the head of the department, and constituted a valuable extension to the routine laboratory and class work. Another feature—the initiation of the members' wives and sweethearts into the mysteries of a chemical smoker—proved very popular, and will probably be continued, in view of the facility with which the ladies adapted themselves to their laboratory environment.

The Cooper Union Chemical Society is active and progressive in every phase of its endeavor. Although working along separate paths, several committees are all striving whole-heartedly for the attainment of a better Cooper. Among them are:

The Organization Committee, headed by Professor Eaders, which represents the society at the Federated Alumni meetings, and coöperates on matters pertaining to Founder's Day and Alma Mater.

The Degree Committee, in charge of Mr. Albert David, which is striving for the awarding of advanced degrees to graduates whose work entitles them to additional academic recognition.

The Welfare Committee, headed by Mr. S. A. Samuels, which helps the Executive Committee select proper duties for the society to undertake. The Welfare Committee also helps to solve problems affecting the organization and personnel of our Alma Mater.

The Chemistry Building Endowment Fund Committee, of which Mr. Herman A. Metz is chairman.

The Papers Committee, headed by Mr. George Felder, which solicits and selects appropriate papers to be read at meetings of the society.

Because of the Chemical Society's healthy and consistent growth, and steadfast maintenance of Cooper Union traditions and ideals, it has been looked to to play an active part in the reorganization of a general alumni body. A great deal of quiet work by its Alumni Organization Committee culminated in a Founder's Day Dinner on February 12th at the Aldine Club, 300 Fifth Avenue, attended by 458 Cooper men. The tremendous success and significance of this event should mark a turning point in alumni spirit.



L.C. MAZZOLA
President

Cooper Union
Chemical
Society



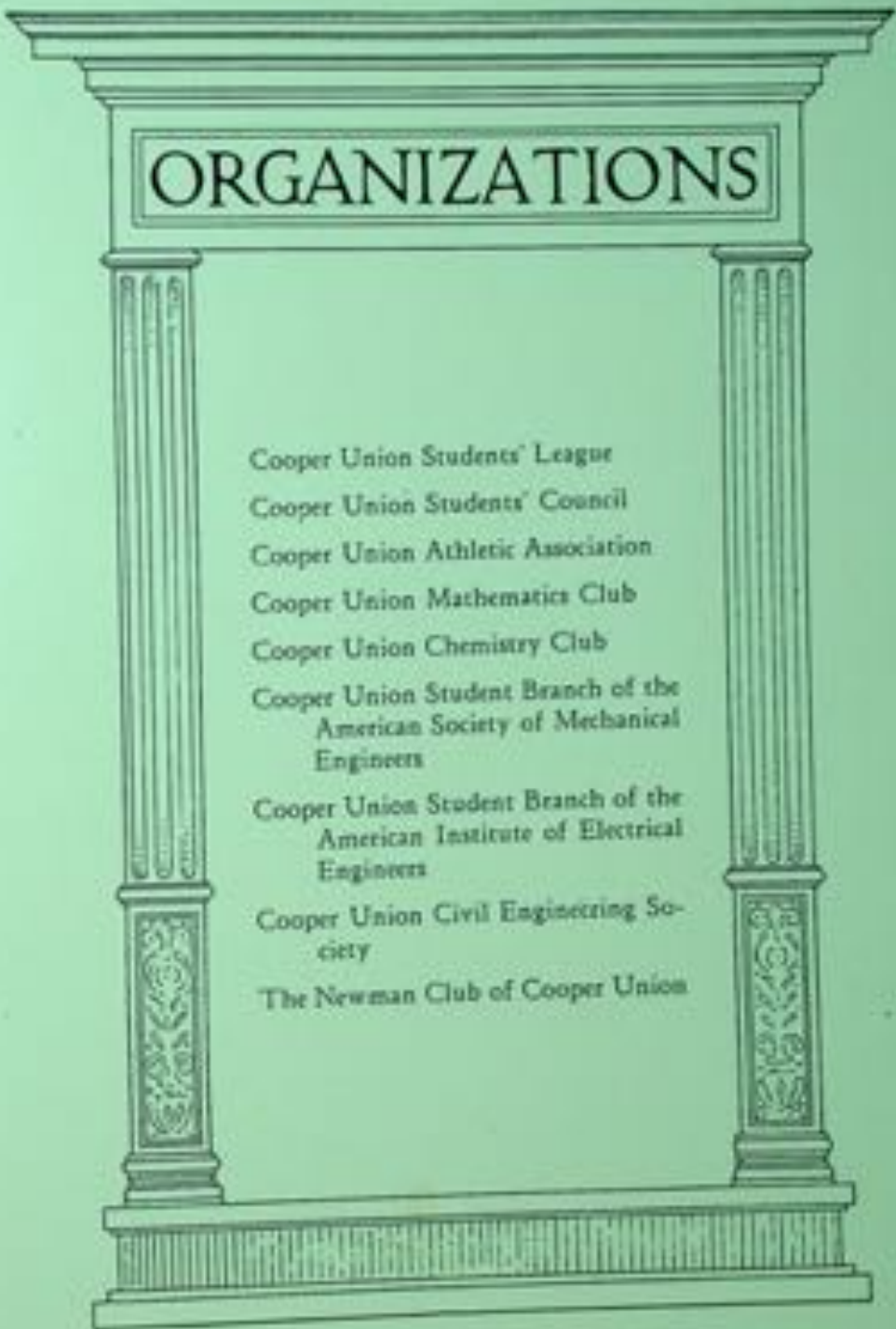
T. Mc KENNA
Vice President



W.H. PEACOCK
Secretary



W.A. PETERSON
Treasurer



ORGANIZATIONS

Cooper Union Students' League
Cooper Union Students' Council
Cooper Union Athletic Association
Cooper Union Mathematics Club
Cooper Union Chemistry Club
Cooper Union Student Branch of the
American Society of Mechanical
Engineers
Cooper Union Student Branch of the
American Institute of Electrical
Engineers
Cooper Union Civil Engineering So-
ciety
The Newman Club of Cooper Union

Cooper Union Alumni Association Institute of Technology

Officers

ALFRED M. ENTENMAN.....	<i>President</i>
W. FREDERICK WELCH.....	<i>Vice-President</i>
GEORGE W. VAN NORTRAND.....	<i>Treasurer</i>
JOSEPH L. HORGAN.....	<i>Corresponding Secretary</i>
FREDERICK W. KOSTING.....	<i>Recording Secretary</i>
EVERETT C. TURNER.....	<i>Delegate to the Federation</i>

The Institute of Technology Alumni Association contemplates holding monthly meetings and endeavors to stimulate greater interest in the Alumni affairs and also to bring a closer relationship between the undergraduates and the Alumni.

The Cooper Union Architectural Alumni Association

The Architectural Alumni Association was organized in 1898 by graduates of that course. Its object is "... to promote good fellowship among the graduates of Cooper Union, to stimulate interest in the artistic, scientific and practical branches of architecture and its allied arts, to further the interests and welfare of Cooper Union. . . ."

The Association meets monthly. The activities consist of lectures, discussions and tours of inspection. Socially, the Association enjoys itself at dinners, dances, smokers and outings.

Every student of the architectural course is eligible to associate membership. Members, however, consist exclusively of graduates. The officers are:

WM. H. WAGNER.....	<i>President</i>
ROBERT V. OLSEN.....	<i>Vice-President</i>
O. ROSENFELD.....	<i>Treasurer</i>
FRANK H. BERGANTI.....	<i>Secretary</i>

EXECUTIVE COMMITTEE

CHARLES H. MILLER

H. J. CORNELL

ARNOLD LEVIN

League
Officers
1923-1924



PRESIDENT
Joseph J. Reinhardt
'27



VICE PRESIDENT
Martin L. Orner
'29



TREASURER
Herbert G. Wieland
'24



RECORDING SEC.
Miss Dorothy Slayton
'27



FINANCIAL SEC.
Chas. Dalberg
'24



CORRESPONDING SEC.
Elwood Whitney
'29



BUSINESS MANAGER
Benjamin Josephi
'29

Cooper Union Students' League

Officers

JOSEPH J. REINHART	President, G. S. '27
MARTIN L. OWEN	Vice-President, E. E. '24
HERBERT G. WIELAND	Treasurer, E. E. '24
DOROTHY SLAYTON	Recording Secretary, Art '27
CHARLES DULBERG	Financial Secretary, Art '24
ELWOOD WHITNEY	Corresponding Secretary, Art '24
BENJAMIN JOSEPH	Business Manager, Chem. '24

THE work of the Cooper Union Students' League for 1923-24 was begun by the sale of athletic subscription tickets, thus continuing the policy of the Cooper Union Night Athletic Organization which had been absorbed by the League at the last meeting in the spring. Under the auspices of the League the entire athletic program was carried out.

Soon after the opening of college the recording secretary and the treasurer were forced to resign because of illness. Herbert G. Wieland, former president of the Cooper Union Night Athletic Organization, was elected to the office of treasurer, and Miss Slayton, representing the Art Department, was elected recording secretary, this being the second time in the history of the League that a lady has held office.

The Athletic Rules, governing the eligibility of candidates for Varsity teams, were presented to the League for ratification by the Athletic Committee. After two weeks of heated debate, Dean Hartmann stated that it would be necessary for the League and the Athletic Department to again separate and exist as two distinct bodies as was the case before. Following this statement the Athletic Committee withdrew these rules until the proposed reorganization has been realized.



Carl F. Busow and Henry L. Spiro, League presidents in '21 and '22, respectively, were elected to honorary membership in the League for their meritorious work for Cooper Union in various ways, both at Cooper Union and among the Alumni.

A medal was offered by Carl Busow to the student adjudged as having done the most for Cooper Union, the question to be decided at a meeting in April by vote of the League delegates.

There still remains the Annual Entertainment and Dance at the Waldorf-Astoria, the last final social function before the spectre of the final examinations looms up before us. It is hoped that this event will prove as popular as last year, when both the Main Ballroom and the Astor Gallery were filled to capacity with Cooper students, alumni and their friends, forgetting studies for a day in the general merrymaking.

Many a reunion of old friends, almost forgotten in the rush and hustling of work-a-day life, was witnessed at this function. The affair proved successful, both socially and financially, and it is generally believed that April 25th will see a repetition of the success on an even larger scale.

Athletics

Athletic Committee

JOS. J. REINHARDT.....	Chairman, G. S. '27
HERBERT G. WIELAND.....	E. E. '24
LOUIS FIDELGOLYZ.....	Chemistry '25
RALPH E. LOWE.....	G. S. '26
ED. F. RUSSELL.....	E. E. '24
FRANK LAMBL.....	G. S. '25
MILTON ABRAHAMSON.....	G. S. '24

THE Athletic Department of the Night School was founded in 1919 when, under the name The Cooper Union Night Athletic Organization, a small but determined group of students formed a basketball team, thus paving the way for bigger things to come. This organization was taken into the Cooper Union Students' League in the spring of 1923, and under the control of the League, the last athletic year proved to be even greater than had been predicted by the most optimistic.

Triumphs in football, basketball, baseball, swimming and track have brought glory and honor to Cooper's halls.

Football, in its third year at Cooper Union, inaugurated the 1923-24 sport program and proved extremely popular with the undergraduate body. The team showed its indomitable fighting spirit when, after losing its first two games, it defeated the remaining five opponents without being scored upon. A great deal of credit is due the members of the team who sacrificed much of their time to give Cooper Union a place on the collegiate football map, a feat without parallel, as Cooper Union is the only night school that can boast of such an accomplishment.

Basketball has by no means lost its popularity since the advent of football. The team proved that it is a truly representative Cooper team, by winning more

than half of its games by one-sided scores. In losing to Princeton, Lafayette and St. Francis such a remarkable brand of basketball was exhibited that even in defeat great credit was due to the team. In the Princeton game, that never-say-die spirit, which characterized all Cooper teams of the past, almost wrested victory from the visitors from Tigertown in the last minute of the play. At half-time the score had been 17-8 in Princeton's favor, but by the remarkable playing of Cooper the Princeton men were swept off their feet and at the final whistle the referee announced a 27-24 victory for Princeton. No man who saw this soul-stirring battle will ever forget it.

Swimming, in its second year, has taken its place among the important sports at Cooper. In four meets, only once did our team fail to bring home the laurels of victory and that in the dual meet with Wesleyan. When it is considered, however, that the Connecticut mermen lost but once this season, and that to Yale, the inter-collegiate champions, it will readily be seen that this defeat did not spell disgrace.

Of the track team it may be said that every man is working diligently to measure up to the standard set by the other teams. Under the able tutelage of Coach Warburton the team is spending its Sundays preparing for the season about to open.

As we go to press the Interclass Basketball Tournament is holding the attention of the students. The interest shown in this tournament proved to be even greater than had been anticipated by its sponsors, twelve teams having been entered. This should develop new candidates for next year's Varsity team, which will lose several of its members by graduation.

The season just past has been the most successful in the athletic history of Cooper Union, and it is hoped that the next will be even greater. Much of the credit is due the team managers who devote many hours arranging a schedule and whose importance is seldom realized by the undergraduates.





COOPER UNION STUDENTS COUNCIL

Cooper Union Students' Council

Officers

HARRY F. THOMPSON.....	<i>President</i>
FRED BUCHENDORF.....	<i>Vice-President</i>
DAVID SAMSON.....	<i>Treasurer</i>
MISS ZELLA HYMER.....	<i>Recording Secretary</i>
WALTER A. DEAN.....	<i>Corresponding Secretary</i>

OPERATING under its new constitution, as formulated at the close of the last school year, the Students' Council has had a very successful season. The product of last year's constitution makers has been put to the test with most gratifying results, as evidenced by the dexterity and smoothness with which the business and social affairs of the Council were handled throughout the year.

Long before October the Executive Committee was busy planning the second annual Freshmen reception, which took place the second day of the school year. This event proved to be a successful and appropriate means of introducing the Freshmen to the student body in general. Shortly after the reception, preparations were under way for the annual entertainments and the school dance.

The Thanksgiving entertainment by far exceeded that of previous years in quality and variety, all classes being well represented on the program. For such a successful affair much credit is due to the ardent efforts of the social committee.

The Council has made great strides toward the founding of a chapter of the "Tau Beta Pi" honorary fraternity in the Institute of Technology, and undoubtedly within a year this great achievement will be realized.

The third annual dance was held on March 13th at the Waldorf Apartments. It was a truly joyous and successful undertaking.

On "High School Day" the Council held "open house" for High School students interested in coming to the Institute.

In summing up the activities of the organization for this year, it may be said that although the Council has been especially hampered by the insolvent condition of its treasury at the beginning of the year, it has made much progress and is in a position to carry on its good work next year.

DAY ATHLETIC ASSOCIATION



Cooper Union Athletic Association

Officers

A. PRINCE.....	<i>President</i>
E. CARBONE.....	<i>Vice-President</i>
F. BURNKENDORF.....	<i>Corresponding Secretary</i>
D. MOORE.....	<i>Financial Secretary</i>
PROF. BRUMFELD.....	<i>Treasurer</i>

THE year 1923-24 marked a new epoch for the C. U. A. A., for in it the ultimate goal of the Athletic Association was reached, namely, furnishing complete gymnasium facilities for its members.

After a long period of uncertainty, a fully equipped, newly constructed gymnasium, but a short distance from the Institute, was obtained. A large swimming pool and an out-door tennis court were also made available for use.

Because of the increased expense, the Association found it necessary to increase the current dues. By doing this, the membership decreased considerably in spite of the earnest efforts of the officers to maintain the high standard of previous years. This decrease in membership is to be lamented, for, unless the students show that they really desire gymnasium facilities the idea may be abandoned in future years.

The Constitution was revised and acted upon by the Executive Committee and placed before the Association at large for adoption. The outstanding features of the new Constitution are: The centralizing of the governing power in the Executive Committee thereby doing away with the former cumbersome Representative Committee entirely; and raising the requirements for obtaining the Varsity "C."

The services of "Tubby" Raskin, former captain and star of the basketball team of C. C. N. Y., were again obtained this year, and from the results of the games which the team has played we can say that "Tubby" has given us results.

This may be termed the critical year for the C. U. A. A. for vast departures from what had become the traditional method of management have been made. Whether these departures will in their turn become the accepted or whether there will be a reversion only time can tell, but all indications point to a bigger and better future.

Cooper Union Mathematics Club

Officers

FRED G. BRICKENBURY, '23.....	President
BARNETT C. KENDRICK, '23.....	Vice-President
HENRY ALDER, '23.....	Secretary-Treasurer

TO a career in engineering, mathematics is an invaluable tool. In addition, it imparts to the man who masters it, the ability to think clearly along logical lines. This ability, so obtained, is a valuable asset in coping with the problems arising out of the realities of life. Therefore, Mathematics holds a unique position in a technical institution where few opportunities are offered to study subjects of a so-called unessential nature.

The Cooper Union Mathematics Club was organized in the academic year 1920-21 by a group of students who, realizing the importance of the science, wished to pursue the subject a little further than possible in the limited time allotted to it in the curriculum. The plan met with instantaneous favor and interest from the Mathematics department, and a beneficial influence is exercised upon the club by this body. The activities of this organization consist of bi-weekly talks given by members of the club and at times by members of the Faculty and others who are willing to deliver a paper to the Club on any subject connected with Mathematics, and the awarding of a slide-rule to a member of the Freshman Class for general excellence in Elementary Mathematics. The prize for the year 1922-23 was awarded to Frederick Miller.

Last year it was felt that the functions of the club should be made more concrete. To this end a committee was appointed to draw up a suitable constitution during the summer recess. This was submitted to the club, for approval, and was formally adopted on October 25, 1923. With this as a basis, and the continued interest of a large number of students, the future of the society seems well taken care of.

The first meeting of the year, and one worthy of note, was held in the Physics lecture room. Mr. Bose, a Hindu mathematical prodigy, spoke to a large audience and demonstrated his unusual ability to carry on lengthy mathematical calculations mentally. He is able to multiply numbers of forty digits together, extract roots, give the day of the week upon which any given date will fall, and perform other truly astounding feats, all without written aid.

Papers delivered by the students, during the past year, were as follows:

Lalain, '23, on computations with the fingers as practised by the Russian peasants; a very interesting paper which surprised the club, by showing these present that the fingers are a valuable aid to those who cannot write, and that some rather complicated computations may be so carried on.

Feldman, '21, on a method of finding the dominical letter of any year; a talk that presented to the society a method by which it is possible to find the day of the week upon which, any set date will fall without extensive calculations.

Frederick Oberfell, '25, on a topic in the theory of numbers in which he presented some unique problems together with original solutions.

Fred G. Bahrendorf, '25, on the duo-decimal system; an instructive talk which acquainted the students present with what the duo-decimal system is and how a number may be changed from one system to another. Besides touching on the advantages and disadvantages of the system, the speaker demonstrated how computations have to be made in it.

Frederick Miller, '26, gave an interesting paper on the nine point circle and also presented some original research in the theory of numbers. The circle, referred to above, is a circle drawn so that it passes through nine points connected with any given triangle; that it did so was ably proved by Mr. Miller.

Fred Van Der Voort, '23, presented a paper on different systems of notation, well executed and of an interesting nature.

Lalor Fankuchen, '26, on the trisection of the angle; a topic of historical interest, made possible through the courtesy of the Rev. Henry J. Wealing, a blind Jesuit priest, of Woodstock College, who very kindly loaned the club a manuscript written by himself. This manuscript contains an original method of trisecting an angle and was accompanied by a simple mechanical device based on the principle involved. The talk was well delivered and of marked interest.

The above are all the talks that have been given up to the time this book went to press, but it is hoped that many worthy papers will be delivered between now and the end of the semester.

Cooper Chemistry Club

Officers

PETER KOSTING, '25.....	President
RALPH WENNER, '26.....	Vice-President
MISS ZILLA HYNES, '26.....	Treasurer
MISS DOROTHY SNYDER, '25.....	Secretary

YOU would like to know something of the history of the Cooper Chemistry Club? Yes, my crystal ball will reveal to me the activities of such an organization—ah—I see already a group of students talking heatedly in the corner of a lecture room. The group is made up of Cooper Day Tech's young aspirants to chemical achievements and the formation of a club which is to bring about frequent and intimate intercourse is being discussed.

I now see this group settled and quite calmly obeying the commands of its chosen president, Carl Hack, Cooper's pioneer student of Industrial Chemistry. Plans are being made for technical talks by student and faculty members and for moving pictures of the industries in which Chemistry plays an important part.

Events are rapidly taking place in the lecture room. I see students fervently talking to the groups which gather about them. I see professors fondly pointing out the pitfalls and the playgrounds of the profession. I see now an unusually great assemblage. It is the one hundredth anniversary of the birthday of Louis Pasteur and the students have gathered to pay homage to the memory of this man who had done so much to benefit the world by the painstaking application of his knowledge of Chemistry.

The scene changes to beautiful gardens, mountains and lakes. A holiday mood which has eased the strained expressions that study gives rise to, gay laughter and frolic are the sports of the day. The summer months, interrupted by these jolly outings on Long Island and in New Jersey, are terminated all too soon and the student phase is again predominant in the group. I see wandering about at the Chemical Exposition shortly before gathering for study in the beloved old halls of Cooper.

A new president, Peter Kostling, '25, has taken over the reins of government and the members are enthusiastically planning for the activities of another year. I again see speakers sharing their store of knowledge and experience. Names! Yes, I can give you the names. I see Dr. Byers telling of his experiences abroad. I see Professor Tech giving lectures which bear on the paint industry. I see Dr. Wenoon explaining the use of catalysts for the hydrogenation of oils, and I see Professor Enders discussing—oh, cheerful thought—embalming.

I also see students giving their fellows the fruit of study along particular lines. Names again! I see Mr. Marcus, '25, discussing the hazards of mine fires. I see Miss Soover, '25, describing Bakelite, a commercial product of chemical research, and I see Mr. Audino, '25, advancing the theories of Surface Combustion.

The Club has not neglected the lighter things of life, for I find the members gathered in a theatre where they find "The Whole Town's Talking," and later I find them partaking of the food of their yellow brothers.

I see new faces entering the group and wider activities being undertaken by the Club. My sight fails me—the hall is clouding, but with a rosy mist of the happiness and success which comes as a reward to the Cooper Chemistry Club for its great work to aid the advancement of Science and Art.

THE CRYSTAL GAZER.

Cooper Union Students' Branch of the American Society of Mechanical Engineers

Officers

PROF. GEORGE F. BATMAN.....	<i>Honorary Chairman</i>
CHARLES A. GRAMLING, '24.....	<i>Chairman</i>
F. G. HEYDT, '24.....	<i>Vice-Chairman</i>
ALBERT E. LOBECK, '25.....	<i>Secretary</i>
H. F. ROEMERLE, '25.....	<i>Treasurer</i>

ANOTHER successful year has been added to the history of the Cooper Union Student Branch of the American Society of Mechanical Engineers. At the meeting held in February, 1923, the members were addressed upon the subject of "The Right Way to Do Work," by Frank B. Gilbreth, one of the foremost exponents of the science of motion study. Student papers on various engineering subjects taken up in the Senior Class were presented at the spring meetings.

In March the Branch united in a joint meeting with its sister societies, representing the Electrical and Civil Engineers at Cooper Union, and in April participated in the conference at 29 West Thirty-ninth Street of all the student branches of the American Society of Mechanical Engineers.

The full enrollment of the Junior and Senior classes in Mechanical Engineering was again secured at the opening of the new academic year, and the present officers were elected as indicated above. The number of subscriptions received for *Mechanical Engineering*, the official journal of the parent society, at the reduced rates offered to members of the student branches, and the use made of the employment bureau maintained at the Thirty-ninth Street headquarters indicate a growing appreciation of the advantages of membership.

During the fall and winter the Branch has been addressed by President John L. Harrington, of the American Society of Mechanical Engineers, on "The Financial and Business Side of Engineering," and by Olaf G. Gerdin, Assistant Engineer of the Economics Division of the Interborough Rapid Transit Company, on "Progress in Modern Power Stations."

Several visits of great interest have been made during the fall and winter. Members of the Branch are among the few who have had an opportunity to go into the vehicular tunnels now being constructed under the Hudson River. Those who made the trip to the Ford Motor Plant at Kearney, N. J., received an object-lesson in quantity production. Members interested in marine engineering made an inspection trip through several of the ocean steamers docked at Hoboken. On another occasion the power plant of the Woolworth Building served as a laboratory for the members of the Branch.

As this issue of THE CABLE goes to press, the program contemplates an address by Thomas E. Keating, Engineer of the Turbine Department of the Westinghouse Electric & Manufacturing Company, on "Observations on Modern European Power Plants," with the probability of a joint meeting with the Stevens Engineering Society.

In all these activities, the guiding hand of the Honorary Chairman, Professor George F. Bateman, has been felt and appreciated.

Cooper Union Students' Branch of the American Institute of Electrical Engineers

THIS year is the third in the activities of the Cooper Union Branch of the American Institute of Electrical Engineers. The Branch has increased so greatly in strength since its inception, that it is now the second largest in the United States. Its meetings are as interesting and as well attended as any of the Student branches.

Several important changes of policy have been effected this year. Most important of these is the change in the Constitution of the Branch by which lower class members are given representations on the Executive Board. Heretofore only Seniors and Juniors comprised the Executive Board, but now Sophomores and Freshman will have a voice in the guidance of the activities of the Board.

We have not space here to give an account of all the activities of the Branch, but two meetings are so noteworthy that they cannot reasonably be omitted.

The December meeting was attended by approximately 150 men who gathered in the Physics Lecture Room to listen to Professor J. H. Morecroft, of Columbia University. He spoke on "The Relation of Radio to the Engineering Profession." He showed how the desire for improvement of Radio communication affected every phase of engineering. He exhibited both the smallest and largest types of vacuum tubes and brought out the novel conception of a negative resistance. Professor Morecroft's talk was voted the most interesting ever heard by those who had the good fortune to be present.

In January 350 students crowded into the Physics Lecture Room to attend a demonstration of the operation of a manual telephone switchboard. The meeting was opened by a presentation of a Harold Lloyd film, "Number, Please!" which demonstrated how the operators do not work. Then two fair operators went through the process necessary to put through a call. They showed several things which are conducive of poor service and showed how to avoid them. The meeting was the best attended of any of the Branch meetings.

The Branch has begun negotiations for a joint meeting with the Student Branch at Brooklyn Polytechnic Institute and for a Convention of all Student Branches. This Convention, if plans are followed, will be held in New York City and will be similar to those held by the parent body. Both of these are still in the embryonic state, but there is a fair possibility that they will eventually be consummated.

The Branch has grown greatly both in strength and usefulness in its short life. Its meetings are proving both instructive and interesting to those who are interested enough to attend them, and if past performances are any criterion the future indeed looks bright.

The Cooper Union Civil Engineering Association

Advisors

PROFESSOR FRANK E. FOSS

MR. J. P. J. WILLIAMS

THE Cooper Union Civil Engineering Association offers to the students enrolled in the Civil Engineering Courses of both Day and Night Departments the opportunity to receive first-hand information on relevant engineering topics. It is the aim of the organization to provide speakers of wide experience to lecture at the meetings which are open to the entire student body.

During the past year, a late start was made in continuing the activities. This was brought about by the uncertainty of obtaining admission to the C. U. C. E. A. as a student branch of the American Society of Civil Engineers. Owing to the persistent efforts of Professor Foss and Mr. Williams it is now quite certain that the national engineering body will grant a charter to Cooper.

In January, 1924, the Association obtained the services of Major R. A. Logan, of the Canadian Air Service and former Dominion Land Surveyor, who spoke on "The Engineer in the Frozen North." The lecturer dwelt upon the difficulties to be encountered in pursuing engineering operations in the Northland and discussed the flight of the U. S. S. *Skwasdoah*, which was being contemplated at that time by the U. S. Navy Department.

The activities of the year close to a close with the general meeting held by all of the engineering societies of Cooper.

Newman Club of Cooper Union

Officers

G. N. VACCA.....	<i>President</i>
MISS HILDA WARD.....	<i>Vice-President</i>
J. J. WELCH.....	<i>Secretary</i>
G. GUTTRON.....	<i>Treasurer</i>

EARLY in 1913 a group of students undertook the formation of a Newman Club at Cooper Union with the object of welding those of our students who share a common faith into a Social and Recreational and Welfare Organization. After the usual preliminaries of the organization, the Club held its first meeting in the latter part of March and proceeded to adopt a Constitution. Application was then made for admittance into the Federation of College Catholic Clubs, a national organization, consisting of similar clubs from a great many colleges and universities, among them being Harvard, Princeton, Yale, Pennsylvania, Columbia, Cornell and some state universities such as Ann Arbor, Madison, Champaign, Berkeley and California. The Club was admitted to the Federation as an active member.

Monthly meetings are held at the Newman Hall, 635 West 116th Street, New York City. This is a building set aside for the use of the Newman Club of the New York Province, a sectional division of the Federation, consisting of those clubs in New York and its environs. These meetings usually consist of a brief business session, followed by a lecture and a social hour. The lectures are along educational and religious lines. Thus there have been talks on Evolution, the Life and Works of John Henry Newman, effect of Science on History, the District Attorney's Office and its work, etc., all delivered by eminently fitted men. The social hour consists of dancing, singing, musical entertainment and sometimes refreshments. The meetings are open to any and all who care to attend. Plans are being made for joint meetings with neighboring clubs.

During the past year the Newman Club of Cooper Union has been represented at the annual conference of the Federation which was held at Cliff Haven, N. Y., and at the convention of the New York Province.

The present membership is about one hundred, but indications are that the ground has only been scratched. There is every reason to believe that the movement will be a pronounced success.

This meeting, with many delegates from our associated clubs, was an occasion of much good fellowship and edification due to comparing experiences and laying plans for our future, when as alumni the ties that bound us in friendships during our college years will become all the stronger.

The Cooper Union Debating Class and the Cooper Union Elocution Class

ALL men desire at certain times to express themselves by the spoken word in some more accurate or impressive way than that of the ordinary carelessly talk of every day conversation. The Cooper Union Debating Class is intended to fill this need. It meets every Saturday evening from October to May and the work includes Parliamentary Procedure, Oratory and Debate. Outside of the half-hour instruction by the teacher, the Class conducts its own meetings. The members elect a Chairman and a Secretary each month. A Literary Committee is appointed by the Chairman for the month and this Committee submits a list of questions from which the Class chooses the topic for discussion. The subject is selected two weeks in advance, and every member of the Class is expected to prepare a four-minute speech on each topic. Even though he cannot get the platform to deliver debate, he has had the exercise of preparing on the subject, by gathering material that bears on the affirmative or negative side, by sorting and arranging this material until it presents a logical arrangement and by casting it into words that will adequately express his meaning. This mental exercise makes him more skillful as the months go on and it also enable him to compare his work with that given by those who speak from the platform. In a class of sixty or seventy students the competition is strenuous. The class list is called every evening to select four eight-minute speakers who open the debate—two on the affirmative and two on the negative side. After this opening of the discussion the platform is given to the volunteer speakers in their four-minute speeches.

A five-minute oration is prepared each evening by an appointed student, and certain evenings are devoted entirely to original orations. The Debating Class works under its own Constitution, with the direction of the Chairman and the guidance of the Instructor. All the live and interesting subjects of the day, whether of City, State or National importance are discussed. For example: The Mellon Tax Revision Bill, the Recognition of the Soviet Government, the Invasion of the Ruhr, Prohibition, the Bok Pease Plan, and so on.

The spirit and originality of a man is developed in this work and no one can pass through the Cooper Union Debating Class without gaining self-control and ease on the platform and clearness and fluency in expressing his thought. These are qualities of power and also make for the better enjoyment of life. Many a timid tongue-tied man has gone out of this class with a sense of independence and confidence useful to him for the rest of his life.

The Cooper Union Debating Class has an Alumni Association which holds firmly together and which retains a strong interest in the work of the Class. This body offers a prize to the best orator and the best debater of the year and these prizes are conferred by the president of the Alumni at the closing meeting.

The Cooper Union Elocution Class meets on Wednesday evenings from October to May. The work of the Class is English speech and recitation. Instruction is given in voice, speech and interpretation. The student is expected to prepare a short selection for each evening and the choice is a personal one, except when the Instructor appoints a certain line of study to develop particular qualities in the speakers. The whole range of English literature is open to the Class and selections are made from the best old writers to the most modern makers of prose and poetry. The selections may be humorous or serious, dramatic or lyric, simple story telling or strong prose orations, and in time the knowledge of literature gained by the student becomes a large part of the education of this Class.

The students also learn ease and good style in platform speaking and they can translate their training into social and business uses, for they get rid of fear and self-consciousness, two very serious handicaps in life. Self-expression under control is a fine accomplishment, and a developed literary taste is a lasting pleasure. Men and women are admitted to both classes.

Books on debate, oratory and recitation are to be found in the Cooper Union Library and the list is being increased each year, so that the students of these two classes may find valuable study books easily available.

ATHLETICS



COOPER UNION FOOTBALL TEAM



Football

IN the early part of September, when Manager Chas. Fruehan issued the first call for candidates for the football team, some thirty odd men responded. Here for the first time they met Cooper's new coach, Kay Bloomgarden, who was to carry on where Frank Becker had left off. The rather small showing was very discouraging, but this was probably due to the fact that school had not yet opened. It was with this band of men, however, that Bloomgarden started to build a team which finally turned out to be the best that Cooper has had.

It was very evident when Bloomgarden took up the reins that Becker's chief asset had been his line coaching ability. The linemen were practically all veterans, but this had no influence whatsoever on the new coach. He promptly set to work to build an even stronger line, and when one stops to consider the wonderful playing of these linemen in all the games this year, little more need be said on that score. It was this fast-charging and powerful combination that made possible the gains secured.

In the seven games played this year but one kick was blocked and only once was an attempted forward pass stopped behind the line of scrimmage. Very few gains were made through the line by the opposing team. Even St. John's College, the strongest team Cooper met, had to resort to the aerial game in order to win.

For the backfield, but three men of last year's team appeared for the first practice, and with only a few new men Bloomgarden had a difficult task on his hands. In the first few games Kay found it necessary to try out many different combinations of backs until he hit the right set of men who were able to gain consistently. From then on it was just a question of more and more practice to drill these men until each man knew exactly what to do for every play. With a line that could hold its own against any team and a new-born backfield, Cooper proceeded to win five games in succession and wound up the season with five victories and two defeats. Compare this with last year's record when but one game was won.

Not enough praise can be bestowed on the coach and the men. The first two weeks of practice were spent in putting the men in physical condition and then Kay settled down and started to teach football. Slowly but surely the men rounded out into a team, and when the first game was played their football ability may not have been of the best, but they were in condition to play a good game.

On Columbus Day the team played their first game against St. John's College at Ebbett's Field, losing by the score of 19-0. The game was much harder fought than the score would indicate, however, for Cooper put up a stubborn resistance against their heavier opponents. Except when the three scores were made, via the aerial route, the ball was generally in St. John's territory. Cooper had potential tallica but were not able to convert them into scores. The game was by no means a walkaway for the Brooklyn college, despite the fact that our eleven were unable to cross their goal line.

Traveling to Philadelphia the next week, the Maroon and Gold lost again by the score of 19-0 to the light but fast St. Joseph's eleven. The field was muddy after the rains of the previous day and neither team was able to uncover its speedy attack. Somehow Cooper's line did not show the same strength that they did when they encountered the St. John's team. The successful line-plunging of the Philadelphians was made possible by their being able to concentrate their entire

backfield and about half their line at one point in Cooper's defense. Then, again, our backfield had a tendency to fumble at critical moments and the St. Joseph players were ever alert to convert these lapses into tallies.

After a week of hard practice the Cooper eleven journeyed to the Bronx and defeated the strong Manhattan College outfit by means of a field goal. The game was full of thrills and time after time the spectators cheered lustily as spectacular plays were made. Cooper's line-plunging game was conspicuous by its absence, most of the gains being made by forward passes. The second team started the game, in order to save the regulars, but the Manhattan team proved stronger than expected and the second period found Cooper's full strength on the field. The Bronx college was outplayed throughout the game, but our men did not seem to have the necessary punch to make the score greater. The Manhattan eleven made two first downs to our eight and they completed one forward pass while the Maroon and Gold gained 136 yards by means of nine forwards. Our forward passing game, as well as our new shift formations, worked quite well.

Cooper's only score was made in the last period by Captain Garry, who kicked a neat field goal from the 37-yard line. Cooper had rushed the ball to the 35-yard line, aided by a long forward pass. Two line rushes gained but four yards and Garry was called back to try his luck with his educated toe. Receiving the pass from center, he sent it straight and true between the goal posts. It can be said that the drop-kick was perfect and would have been good even from the 45-yard line.

The Maroon and Gold eleven kept up the good work and on the following Saturday defeated the strong Seton Hall combination. The Jersey lads started the game with a rush and opened their entire bag of tricks early. Their attack was soon fathomed by the Engineers and Seton Hall could do very little thereafter, as the Varsity kept continually tearing through their line, breaking up their double and triple passes before they could get started. Improvement in the playing of Cooper was especially noticeable, for their attack was sharper and their defense tighter. One of the big changes in favor of the Varsity was the increased alertness and more powerful charging of our line.

Cooper's touchdown came in the early part of the last quarter and was gained solely by the plunging ability of the backfield. The attack began on the Maroon and Gold's 40-yard line with a whirlwind offense which bewildered the Seton Hall linemen. Morris, the Cooper quarterback, rotated his backs splendidly, and with Fidelgolts, Goldstone and Powell carried the ball over for the score. Holes were opened with clocklike precision that swept the Seton Hall players to right and left. After the touchdown had been scored, Garry, with his trusty but somewhat damaged foot, added the extra point to Cooper's score with a neat drop-kick.

The next victory was obtained in our game with Webb Institute of Naval Architecture. After the smoke of the battle had cleared away the Maroon and Gold had gathered in three touchdowns. In the initial period Lowe picked up a fumble and gave his team the first score. In the second quarter a long forward to Goldstone resulted in another touchdown. The Cooper steam-roller was quick to get started again and a series of passes brought the ball to the five-yard line from which point Powell carried it over. The second half opened with Cooper's team completely changed. Bloomgarden sent in the second team this half, and although they did not score against Webb they handled themselves in almost faultless style. Sruger's 45-yard run from the kick-off stood out prominently. The Maroon and Gold were superior throughout the game, but were given stiff

opposition in the closing periods. The improvement in this game was well marked. The work of the line in opening up holes and of the backs in forming interference was well above past performances. The forward pass attack proved the best ground-gaining implement of the day. The line-smashing attack also gained at will and was used whenever a few yards were necessary.

Before the largest crowd that turned out this season to see our team play, the Maroon and Gold reversed last year's story and defeated the New York "Aggies," 24-0. But even the final count does not show the superior brand of football that our team played. While the "Aggies" fought hard throughout the game they could not withstand the offense of the Cooper machine. The farmers were outplayed in every period and not until the last quarter did they have a chance to score, when a long forward placed the ball on our five-yard line. With but inches to go for a score, however, they were stopped by the second team which had replaced the Varsity.

Before sixty seconds had elapsed after the start of the game Cooper had a touchdown to its credit, due to Captain Garry's alertness. In the second play of the game the "Aggies" captain fumbled, and Garry, quick to see his chance, picked up the rolling ball and ran over for the first touchdown. In the second period the Maroon and Gold line blocked a kick and Lowe was there to recover the fumble. A long pass brought the ball to the goal line and Carlson went over for our second touchdown. Cooper scored again in the third period by blocking an "Aggie" kick. The ball rolled out of bounds, with a number of Cooper and "Aggie" players after it, but Powell recovered it for Cooper on the "Aggies" 17-yard line. Garry then threw a forward to Goldstone who raced over for the score. In the last quarter Fidelgolts made another touchdown after a 40-yard pass had been completed.

In the last game Upsala bowed to Cooper to the tune of 18-0. Playing on a wet and muddy field the Maroon and Gold ended their season with another victory. In winning this game the Varsity displayed a type of football that was of the highest order. All three touchdowns were made by the old but reliable line-smashing attack. The somewhat slippery and treacherous footing slowed up Cooper's running attack and the serial game could not be developed to any degree of success, due to the high wind prevailing at the time. Nevertheless our men scored in the second and fourth periods.

In the first quarter the Upsala team stopped our attack, but soon after the second quarter had opened Cooper rushed the ball down the field and Powell carried it over for the first touchdown. In the same period Fidelgolts threw a short forward to Powell who received the pass on the 22-yard line and twisted his way in and out of the Upsala men to their 10-yard line where there was but one man between him and the goal line. Powell cleverly evaded this man until Wieland was able to block him out of the play and Powell then scored a touchdown. In the second half frequent penalties stopped further scoring, but in the last quarter Carlson showed rare judgment and Goldstone went over for the last tally. The team would probably have scored again but the final whistle blew as Cooper rushed the ball to Upsala's 19-yard line.

The backfield's work was strong in all periods and gain after gain was made by plowing through the line; the off-tackle thrusts worked to perfection, and Powell's gains, made with the assistance of Carthan, contributed much to the final score. His playing during the afternoon stood out conspicuously. With Carlson handling the team, and Fidelgolts and Goldstone in the backfield they played exceptionally well. The line performed splendidly and the coordination of the



team as a whole left little more to be asked for. The line charged as a unit in opening up the holes that the signals called for, and with these openings the backs found little difficulty in getting through for numerous long gains.

The Summary:

Cooper		Opponents
0	St. John's College, Ebbett's Field	19
0	St. Joseph's College, Philadelphia	19
2	Manhattan College, New York	0
7	Seton Hall College, Flatbush Oval	0
18	Webb Naval School, Flatbush Oval	0
24	New York Aggies, Flatbush Oval	0
18	Upsala College, Kenilworth, N. J.	0
—		—
70		38

FOOTBALL OUTLOOK

The 1923 football season has now closed, and from the results obtained, it may be safely stated that it has been the most successful in the history of this sport at Cooper. Altogether, five games were won out of seven played.

The success of the team is due in a large measure to the improvement of the open field offense as the season advanced. The 1922 team had been a line-plunging team and the 1923 team was composed largely of veterans from the team of 1922 so they still retained their line-plunging ability. Thus, when the open field offense was developed under the able direction of the new coach, the team as a whole proved to be a hard one to beat.

Not too much credit can be given Kay Bloomingarden, the coach of this year's team. It was his contention that, for large, rapid ground gains, there is nothing superior to forward passes and end runs. How successfully he put his plans into practice is a matter of record. Suffice it to say that before he developed his open attack in the team, two games were lost, but after he had done so no team which Cooper played was able to claim a victory from us.

Mr. Leonard Vieth has been elected manager, and Mr. Louis Fideigolts captains of the team for the coming football season.

Already the new manager has arranged a difficult schedule for the next year, several highly rated teams appearing on it. This year's team loses but two or three members by graduation, and with the assistance of a competent coach who has already been engaged, the 1924 season should be an even more successful one than that of 1923.

"INSIDE DOPE"

Tom Garry, El Capitan, whose differential foot has sent the pigskin on many a parabolic flight for those coveted extra points, is a worthy exponent of that old saying, "Wine, women and song." He is also quite proficient in the intricacies of poker.

Louis Fideigolts, more commonly known as "Fido," our elongated fullback, uses his 75 inches of manhood to good advantage, for every time he falls it means an extra two yards. Girls and our future captain are like oil and water, they do not mix.

Charlie Powell's vicious novel reading renders him open to the wiles of others while playing poker going to and coming from games. This curly-haired cherub puts the finishing touches to off tackle smashes.

Art Carlson, our tactical field general, has the gentle habit of hanging a handkerchief on his belt, which gives his mud-bespattered moleskins a dainty look. This and his paper strategy enable him to lead the team to many victories.

Ralphus Lowe, whose brilliant orange jersey should have made him a conspicuous figure, was often eclipsed by being the foundation of a scrimmage pile.

Fat Wieland always played a spectacular though steady game, being inspired by his future better half occupying a conspicuous position in the grandstand at all games. Knowing that member of the fair sex, who wouldn't!

"Eli" Whitney is the Beau Brummel guard of the Art Section. The arrow collar ad personified. Played a hard smashing game all season, but managed to keep that "school boy complexion."

The Epifania brothers, T. and A., who are as well known about the school as the Smith Brothers, even to the extent of shaving, combine Football, Art and Swimming; needless to say they are proficient in everything.

"Brute" Cornish is patterned after a regulation old-fashioned guard, and the gentle application of his 220 pounds usually opens a hole in the opposing line large enough for the entire back field to parade through.

"Red" Clancy, the wild Irishman, usually bets he will get the first tackle and usually accomplishes it. A great man for wild parties in the village, also wild women. He also has a great habit of refusing offers from Michigan and Notre Dame to play.

Sam Carthan, the demon tackle, who goes after the opposing team as though his life depended on it, usually steers clear of Carlson in a practice game. In his spare moments Sam antagonizes the neighborhood with a saxophone.

Fritz Nojack, the big blond Norseman, leaves his glasses off when entering upon the gridiron, but the lack of these does not prevent him from making tackles, although some of them are not according to Article XIII, Sec. 4.

Al Hebling, the teasing tackle and jokesmith, manages to forget frivolities and fun long enough to enter the contest and play a steady and hard game. In his off moments, Al provides the comedy relief in the lecture rooms.

Sam Beattie, who has the honor of listening to the birdies sing more than any other man, during practice, usually gets up none the worse and ready for more.

Kixis, the Sheik of the Bronx, plays football as well as he vamps the women, which is saying something. Frank's presence in the Art Class gives many a girl a thrill.

Ryan usually comes to the field without most of his football regalia. He has to wait until Carlson is carried off the field in order to have a complete outfit.

Ed. Lawrence, the big boy from the city of Churches and cemeteries, seems to bring the atmosphere of his birthplace upon the field, missing tackles harder than any man on the team.

Frank Synger, our brilliant open field runner, once ran 43 yards without being tackled and has not been the same since. Many of the boys are trying to learn where Frank buys his haberdashery. Reason; note ties.

Joe Reinhardt, guard; if sticktoitiveness and fight were money Reine would make Henry Ford look like a man on his way to the poor house. Reine can always be depended upon to furnish Lowe with an argument, foolish or otherwise.

Charlie Fruehan, manager extraordinary and quack doctor who received more abuse (only mentally) than any man on the team, was the hardest working man on the squad. Charlie, friend of the Wrigley Trio, was ever ready with gum for the boys.

Basketball

"Great Oaks from Little Acorns Grow."

SEVERAL years ago a group of students formed the Cooper Union Athletic Organization. The present Athletic Department of the Cooper Union Students' League is the result of that idea. One of the first teams representing Cooper in any sport was the basketball team. As is usual, the first year or so proved to be one of hardship; lack of school spirit, lack of gym, and lack of financial aid had to be overcome; but with true Cooper fighting spirit in overcoming obstacles, the basketball team continued to play.

The 1923-24 season has shown our opponents on the indoor court that Cooper is a formidable opponent. Teams of such caliber as Princeton-Nassau, Lafayette and St. Francis, to mention a few in many, have met the Cooper quintette, and if the home five have failed to win, they have at least given a good account of themselves and have gone down to defeat fighting.

The opening of the 1924 season found the Night Varsity Team with most of last year's veterans able to play. The Stayssant High School Gym was secured for Sunday morning practice; Mr. Dave Tobey, of Syracuse Institute, our last year's successful coach, again took up the task of shaping the destiny of the Cooper quintette. Under his efficient tutoring, the members of the squad merged into a smooth running, high scoring combination.

After a few weeks of hard practice the Varsity five was selected. They were Ludwig (Captain) and Russo, forwards; Fidelgoltz, center, and Seguso and Arillo, guards.

The five were strengthened by Basen, Hoffman and Glover as substitutes.

Ludwig drops them in from all angles and distances, just as a matter of course. Russo burns up the courts with his speed and is a close second to Ludwig. "Fido," getting the top consistently, just stretches and the ball is on its way. Vin Arillo's heavy build lets his opponent know that guarding is Vin's hobby. Seguso, although small, is all over the court at all times. Basen, Hoffman and Glover, a dependable trio, more than hold their own against any three.

Considering time and conditions the team made a wonderful showing.

The season opened with an invasion of Brooklyn by the Cooper combination on December 1st. The Brooklyn Poly five were forced to extend themselves to the limit to defeat the Varsity by the close score of 24 to 22.

A change of atmosphere seemed to benefit the team, for at Albany, on December 8th, they met and conquered two teams. At 2 o'clock in the afternoon the team played the New York State College for Teachers and emerged victorious by a score of 24 to 13. That same evening, despite the strenuous energy expended at the afternoon game, the Cooper Square team defeated the Albany College of Pharmacy by the score of 46 to 31.

A relapse occurred when the team returned to New York. On December 15th Princeton-Nassau defeated the home quintette 27-24. Even at that time the Orange and Black team had to extend themselves to the utmost, although most of their best men were in the line-up.

The Brooklyn jinx seemed to have abandoned its persecution of the home five, for on December 19th Brooklyn College of Pharmacy had its winning streak stopped when Cooper defeated the Brooklynites on the Brooklyn court by the score of 39 to 30.

Just watch his face when he plays. Never a smile crosses his features. At one game, the man jumping against him wanted to wear stilts but the referee refused, saying that "Fido" wasn't trying to use a step ladder or any other mechanical appliance.

"SPARKY" SEGUSO is the little chap with the big brains. Despite his physical makeup, or rather lack of it, "Sparky" manages to make his bigger opponents look as though they were playing marbles or croquet. Even our opponents comment on "Sparky's" playing ability.

"VINCE" ARILLO is the strong man of the team. Strangler Lewis is in continual fear of a challenge to wrestle sent by this member of the Cooper crew. And yet Arillo manages to score a good many baskets despite his heavy build.

HOFFMAN is the quiet man. Yet where a pass is made Hoffman usually gets it. If a ball rolls free Hoff is on it in a bound. Sturdy and always dependable, that's Hoffman.

"ARCHIE" GLOVER is a new man, but he certainly can do things with a basketball, and the man who tries to stop an auto truck with a tooth pick has a better chance than the man who tries to stop "Archie."

"MILT" ABRAMSON is the manager extraordinary. To all appearances "Milt" is as busy as can be. When there's dancing to be done "Milt" leads. When there's money to be collected, "Milt's" there, but when real hard work is on hand, "Milt" has disappeared.

Summary:

Cooper Union		Opponents
22	Brooklyn Poly	24
24	N. Y. State College	18
40	Albany College of Pharmacy	31
24	Princeton-Nassau	27
29	Brooklyn College of Pharmacy	30
31	St. John's	32
25	Convent A. C.	53
47	Brooklyn C. C. N. Y.	26
23	Lafayette	36
33	Cathedral College	23
34	Newark Y. M. H. A.	30
29	Savage Institute	34
36	Newark Normal	44
29	St. Francis	45
29	Brooklyn College of Pharmacy	34
31	N. Y. U. (Wall St.)	14
—		—
322		408

Institute of Technology Basketball Team

FROM a kaleidoscopic view of a crowded season it will become evident that the crack basketball team which the Institute of Technology sent abroad for an encounter with the foremost local colleges scored a tremendous success. With four of last year's veterans as a nucleus and some more or less ambitious players of varying ability, Coach Raskin set about to produce a team that well deserved to represent Cooper Union.

Captain Grabice, Prince, Albert and Thompson remained of last year's team; Judson, Carbone, Masin, Levine, Gluck and Sevesta were the fortunate candidates selected to complete the squad. In the meantime, Manager Dane had arranged an imposing schedule of twenty games, and had secured the gym of the Church of All Nations for practice and home games. Coach Raskin ordered two workouts a week, and after a training period of one month the team was well rounded into varsity calibre.

The first game was played at home with Washington Square College. The contest, which was replete with thrills and rallies, ended with the Tech at the long end of a 25 to 21 score. The playing of Judson, especially in the offense, was a feature of the game. He entered the contest after a few minutes of play and immediately started to roll up the score for Cooper, accounting for 9 of the 25 points. Artie Prince, star of last year's team, did remarkably well, both on the offense and defense. His foul shooting especially was accurate and consistent.

The following game was with St. Francis College. Hailed as the fastest basketball aggregation in the East, the Brooklyn lads expected an unobstructed runaway; but Cooper held them to an even game until a paucity of men available for substitution gave St. Francis the upper hand. Cooper was indubitably beaten and, we must admit, by a better team; however, the playing of Captain Grabice was not eclipsed. He played uncommonly well on the defense and incidentally scored twelve well earned points. The final score was 45 to 20.

The third game was also unfavorable to Cooper. The Pratt Institute defeated the Tech five by a score of 43 to 14. Our quintette led by 4 to 0 after the first three minutes of play; but when Brummer and Underhill got going, Pratt soon piled up a comfortable margin and ran away into a lead from which they could not be headed. After the first half, it was simply a question of how large the score would be at the end; and it was rather large.

The next game, however, was one more pleasant to record—a victory over the New York Agricultural College. It was in this game that the Cooper men were first introduced to a court most uniquely appointed—a long narrow floor with a cord net completely surrounding it. Thompson and Albert provided an impregnable defense, while Grabice, Prince and Masin scored field goals in rapid succession. Five minutes after the initial whistle the score was 10 to 2, at the first half 23 to 5, and at the final whistle the score book read 38 to 18 with Cooper on the long end.

The second game, with the New York Agricultural College, was lost, perhaps because of psychology. The victory over the same team, the week previous, had given us the confidence of success, which should breed valor. It also encourages overconfidence, however, and therefore a tendency to underestimate dangers. The second game with the "Aggies" was poorly and very loosely played; the farmers won, 21 to 20.

The sixth game of the season was a brilliantly gallant fight against odds—and



Institute of Technology
BASKET BALL TEAM

we lost valiantly to the University Club, by a score of 37 to 14. The lads from Brooklyn presented an extremely fast aggregation and very capable on the defense. The Tech five surpassed in the blocking game, however; for with the exception of the sensational Hupe, the remaining players were well taken care of. The playing of Prince was happily reminiscent of his old-time prowess. He accounted for six of the fourteen points, and displayed some truly commendable floor work.

In a very cold gym, in a somewhat heated contest, the Tech Basketball team won its third victory—this time at the expense of Upsala College—by a score of 14 to 7. As the score suggests, it was played in football fashion. In this most unique game, the Cooper men played well. With no outstanding star, they played in unison under the capable floor leadership of Captain Grabiec and held Upsala to but one basket and that well into the second half.

Incidentally, the game was not without its horrid feature; it was an altogether rare and discordant sight to see the graceful forms of our athletes clad in great big slaters during the preliminary practice. For, although it was warmer inside than out, the gym thermometer registered a deflection of six degrees below—or thereabouts. Thompson's graceful hands were protected from the frigid Jersey air by a most unightly pair of woolen mittens. And Carbone's glasses collected a film of frost that made it impossible to locate the basket—but only during practice.

The eighth game was an overwhelming victory for Cooper. The Wall Street branch of New York University was defeated by a score of 38 to 9. The Engineers outplayed the Bankers in every department of the game. By superior speed and accurate shooting, they were able to score eleven field goals to three for the opponents; of these Judson made five and Thompson four. Carbone starred in the foul shooting—he caged six points thereby.

The next game was a return match with St. Francis, who defeated the Tech by a score of 39 to 17. Krating and Grabiec played with brilliancy, although Raye and Moran were in unusually fine form. The Saints simply outplayed Cooper and justly deserved the victory. They passed exceptionally well and their shooting left nothing to be desired; their defense was of the highest order, and their speed dazed the Engineers. Toward the end of the contest Cooper was up in the air and the calm St. Francis' forwards made as many points as they had time for.

Summary:

Cooper	Opponents
25	Washington Square College
20	St. Francis
14	Frazer Institute
38	N. Y. Aggies
20	N. Y. Aggies
14	University Club
14	Upsala
32	N. Y. U. (Wall St.)
17	St. Francis
—	—
194	234



JUNIOR VARSITY

Junior Varsity Basketball Team

THE Junior Varsity was chronicled in this publication last year as an aggregation whose lot consisted of hard knocks and no glory. This year the yeaslings have shown that they could rival the Varsity in spectacular playing and fighting qualities. They have ceased to be a side issue and have become a real team. Seven games were played by them this season. Of these, three were won and four lost. But win or lose the spectators always saw a good fight.

Basen, Lawrence and Miller were the only veterans remaining to play on this season's five. Members of the squad are: Basen (Capt.), Buchman, Fioretti, Glessof, Glover, Lawrence, C. W. Miller, Penna, Strotkamp, Suarez, L. Vieth and W. Vieth. Seguso, who last year played with the seconds, off and on, not only made the Varsity, but starred in a number of contests.

A most satisfying interest in the sport was displayed by the student body. At the first try-out this season, at the Stuyvesant Gym, over forty men turned out. After a few weeks of practice, Coach Tobey weeded out enough good material to make up three teams.

In their first encounter of the season with the Brooklyn Poly Fresh five on December 1st, the Cooper youngsters won their laurels. A shifting combination was used in order to give the new material a chance to show their wares. A dozen men were used in this game.

In order to provide variety a speedy team from Harlem Prep. traveled to Cooper's home court and ended a fast and ragged game with an 18-12 score.

On December 20th another victory was recorded against St. John's Prep. at the latter's court. This contest was of the snappiest and best basketball displayed this season. Cooper was one point in the lead at the final whistle.

Fordham's Prep's quintet gave our Juniors their most decisive beating of the season on January 12th. Although the final score was 24-13, most of Cooper's points were scored in a last moment spectacular rally.

Keeping up their give-and-take attitude the Cooper seconds took Cathedral into camp by a 22-13 score.

February 10th saw Concordia vanquish the Junior basket slingers. 30-20 represented the bad news.

On February 22d the Juniors were outpointed by the Brooklyn Evening High School in the last game of the season.

Summary:

Cooper Union	Opponents
20	Brooklyn Poly Fresh..... 24
12	Harlem Prep..... 18
31	St. John's Juniors..... 30
13	Fordham Prep..... 24
22	Cathedral Prep..... 13
20	Concordia Prep..... 30
14	Brooklyn Evening High School..... 20
142	171



COOPER UNION BASEBALL TEAM

Baseball, Review of 1923

WITH much promising material and a good schedule arranged a successful baseball season was looked forward to, but due to a jinx in the form of bad weather which persistently pursued the team, the end of the season found us on the wrong side of the won and lost column. Weather conditions would not permit more than three practice sessions, and while the form displayed by the squad was encouraging, the brief workouts were not sufficient to put the men in first-class condition.

The infield was fast and well balanced. "Sonny" Moran on first picked off everything within reach and proved a good litter and fast on the paths. The key-stone sack was held down by "Jimmy" Van Sickle who, although only just size and playing his first year on the team, made good from the start. The short field was covered by "Steve" Bederka, the team live wire who, with Van Sickle, engineered some snappy double plays. The hot corner was covered by the old reliable, Capt. "Buddy" Budrick, whose great work proved a decided asset to the team. Always on his toes he kept the rest of the team hustling. The right field was patrolled by George De Angelis, one of the fastest men on the squad and a hawk after fly balls. Tom Frisch, a good fielder and plugger, occupied centre. W. Schuts, a consistent performer, played left.

The hurling corps consisted of "Petey" Walsh and "Johnny" Cleary. Walsh, the great little right hander, has been the team's mainstay for the past two seasons. Cleary, a southpaw with a world of speed, is also a veteran of two seasons.

The opening game scheduled with Seton Hall for April 9 was called off due to the poor condition of the playing field.

The following week the first game was played with Manhattan. In accordance with our seemingly unbroken string of bad luck both Walsh and Cleary were on the sick list. The result was that Moran had to go in the box, and while he pitched a very creditable game we emerged at the small end of the score. The outstanding features of the game were the fielding of Capt. Budrick and the hitting of Bederka, whose "Babe" Ruth swings were as spectacular when he missed as when he connected. A cold wind which swept the field made good baseball impossible and numerous errors resulted on both sides.

The next game was played against the New York "Aggies" at Farmingdale, L. I., and we won, 10-7. The game was more one-sided than the score indicates. The farmers were able to get but four hits from Cleary, who, however, got in trouble by issuing eight bases on balls. This, together with the inability of the infield to handle ground balls, due to the roughness of the diamond, resulted in the runs scored by the "Aggies." Manager Breslow had an anxious half-hour before the game due to the non-arrival of Budrick and Frisch, who had missed the train. However, those two worthies appeared as the game was about to be called, having "hitched" a truck at the station, changing into their uniforms while being subjected to the bumps and jolts so well known by those familiar with Long Island roads. The "Aggies" proved good sports, providing us with supper. On the homeward trip our famous quartet was much in evidence to the dismay of our fellow passengers.

The next game the weather man permitted us to play was with Pratt Institute on May 10th. This proved a free hitting affair which was lost, 7-12, although outhitting the Brooklyn boys 17 to 12. Walsh, who started the game, was not in his usual form and the opposition collected seven runs in the first three



BEDERKA



THE BENCH

WARMERS



OLD FASHIONED

WALSH & CLEARY



CLEARY



BRESLOW



BUDRICK



FRISCH



VAN SICKLE

CONRAD & SCHULTZ



SCHULTZ

innings. Cleary, who replaced him, did fairly well for the remainder of the game. Each member obtained at least one hit, with Bederka and DeAngelis leading with three each. Cleary and Frisch connected with two apiece. Moran and Frisch poled homers over the centre field fence. Budrick and Van Sickle starred on the field, handling twelve chances between them without an error.

Another game was added to our winning column when Brooklyn Poly. failed to go through with a scheduled game, forfeiting 9-0.

The last game of the season was staged at Kenilworth, N. J., against Upsala. We were unfortunate enough to stack up against Magnuson, their crack right hander, who had lost but one game the entire season. We were held to two runs, a homer by Frisch in the first inning being the only one earned. Walsh pitched a good game but the breaks seemed against him and it went for naught.

Copper Union		Opponents
3	Manhattan	8
10	N. Y. Aggies	7
7	Frost	12
2	Upsala	7
—		—
22		34

"Buddy" Budrick, our worthy captain, has never fully recovered from the shock he received when a fair damsel, attending one of the games, made several audible comments on the contour of his under pinions. "Buddy" may some day be a good tensor—but we doubt it.

"Pec Wee" Sickle, the grasshopper infielder, has two ambitions in life. One is to be a second Eddie Collins and the second is to place the fair "City" (?) of Elizabeth, N. J., on the map. We don't know which is the toughest job, but we wish you luck, kid!

"Steve" Bederka counts the day lost when he doesn't get into at least one fight with the Ump. He claims the national pastime is becoming too gentle. Why not join the football squad, "Steve!" They're looking for little playmates.

"Pete" Walsh will consider his life's work completed when he has succeeded in teaching Cleary to throw his "drop" ball. Don't sigh after looking at "Petey's" picture, girls—he's hooked. All the luck in the world, boy; you'll probably need it.

Manager Breslow decided that in order to assume the dignity befitting his position, a moustache was a necessary requisite. Thus the slightest discoloration which adorns his upper lip. Many a lively discussion has been waged concerning its shade on attaining full growth. According to the consensus of opinion it will be grey.

George De Angelis attributes his success in the outer garden to his ability to apply the Calculus in determining the parabolic course followed by fly balls. We think it due to a fair member of the weaker sex who never misses a game and who is looked upon as the team's best bet in the cheering squad.

"Tommy" Frisch never fails to miss the train in going to out-of-town games but usually rushes up at the critical point in the game to put the ball out of the lot with his big bat. Try the stage, "Tommy," you have actor instinct.

"Schulz" is Bederka's good man Friday. They both migrate from the wilds of Jersey and evidently believe in the saying "Strength in Numbers." Schulz is a dependable player and may in time make the team quartet.

John Cleary's pose at bat seems to be inspired, but as John comes from the foreign shores of the Bronx he needs to be. His inspiration comes to all the games and she sure is there when it comes to cheering.



INSTITUTE OF TECHNOLOGY BASEBALL TEAM

Institute of Technology Baseball Team

"Al" DUNA *Manager*
 D. MOORE *Assistant Manager*
 V. CASO *Captain*

AFTER one year of consolidation with the Night School, the A. A. unanimously voted to have a baseball nine of its own for the season of 1923. With this in view, "Al" Duna was elected manager and D. Moore, assistant manager. Four games were scheduled for the team.

Due to a late start and unfavorable weather little practice was had before the first game with Manhattan and the Tech. nine went ignominiously down to defeat. Fast fielding and timely hitting of the Manhattanites, coupled with loose fielding on the Tech's part, accounted for the scoring.

The second game was another set-back, this time at the hands of St. Francis. It was a well played game, however, and promised better results for the nine.

But alas and alack for the above prediction, for a third set-back was received at the hands of Upsala. Probably the absence of several of the regulars, who saw the coming exams looming up into view, had something to do with the defeat.

After the exams the team reunited and travel'd to Rhode Island to play the Provincetown College nine. Exhibiting an excellent brand of ball the Tech led till the eighth inning when a batting orgy saw eight runs cross the plate and marred an otherwise perfect game. Credit must be given to the team for their stiff opposition, for Provincetown was considered one of the best nines in the East.

For the season of 1924, B. C. Emmerich was elected manager and T. G. Guerin assistant manager. To date of writing some six games have been scheduled and from material, both old and new men, on hand, things do look rosy for a good season.

"THE DIRT"

"DINTY" MOORE, playing his third year for Cooper, was incidentally Cooper's best bet for the season. Handicapped by having to wear "specs," "Dinty" nevertheless showed them all "how to pick 'em up at start."

"ED." FITZPATRICK, "the only good Civil," was able to play only two games, but at that he showed his old time form.

"BARNEY" EMMERICH showed the men that he's just as much at home on the diamond as on the cinder path, in fact, more so since he gets all his sleep on the diamond.

"TATNELL," our best bet, had a knack of serving 'em straight and fast.

"WEE-WEE" CARBONE just can't keep out of anything pertaining to athletics, so we find him on the diamond trying to hold his own.

"JACK" WELSH, coming from the Land of Darkness, the Night School, early showed that he was a player of no mean ability, also that he had an eye for beauty, equal to none.

"PETE" REIS, although no longer one of us, is deserving of praise for the all-round playing shown during the season.

"AL" DUNA, also with "Pete" and incidentally with "Barney," needs no further comment. As a player and good sport he was surpassed by none.

"TUBBY" CASO at first was anchor man for the team, literally speaking. A dependable player, cool in a pinch, he could always be depended on to come across.

"INFANT" GUERIN, scorekeeper, utility man, bat boy and mascot, was as necessary to the team as its best pitcher, for without him who would there be to laugh at?



COOPER UNION SWIMMING TEAM

Swimming

THE swimming team, which was organized two years ago, has a most successful season, winning three meets out of four. The team was greatly strengthened by the appearance of five new members. They were William Sadlo, an all-around swimmer of great ability; John Duchemin, speedy at 100 yards; Jack Mollers, a fast sprinter and backstroke swimmer, who has the makings of a star; Albert Fink, a good all-around man; and Michael Musset, a brother of "Seb" Musset, captain of the team, who is a "corner" in the backstroke event. Under the supervision of Manager Epifania and Coach McCloughlin, the candidates and members of last year's team reported three times a week at the West Sixtieth Street Pool.

On January 12th the team opened its season against the Walkill Club, a strong swimming organization composed of former high school stars. After a close and spirited fight, Cooper emerged victorious by a 28-24 score. The meet opened with the 100-yard relay, our team being composed of "Bill" Sadlo, "Jack" Mollers, "Toney" Epifania, and "Jean" Duchemin. Sadlo, the lead-off man, came in on even terms with his rival, but Mollers, the second man, due to inexperience, this being his first appearance in competition, swam out of his course and missed the turn, resulting in a two-yard lead for the Walkills. "Toney" Epifania, our third man, fought desperately to overcome the lead and succeeded in bringing down one yard. This proved just enough to win, as our anchor man, "Johnny" Duchemin was barely touched out. The Walkill team, however, had to turn in a 1:24 1/2 seconds performance. The second event, the dive, went to "Seb" Musset, with "Sam" Beattie second. The 40-yard swim went to "Jack" Mollers, who came back to even up for his relay swimming. "Toney" Epifania scored a close third. "Bill" Sadlo took second in the 220 yards, being beaten by inches in the sterling time of 2:44 1/2 seconds. "Johnny" Duchemin took second in the 100-yard swim, also losing by a touch in the good time of 1:22 seconds.

On February 24 Brooklyn Polytechnic Institute traveled to the Sixtieth Street Baths and received a set back when Cooper took them into camp by a 58-13 score. Last year Poly. beat Cooper, 28-15. Our swimmers completely overwhelmed the Polys. The relay, made up of Sadlo, Mollers, T. Epifania and Duchemin, turned in a 1:26 1/2 time and won easily. The 40 yards was again won by Mollers, with "Toney" a close second. The diving went to "Sam" Beattie, with "Bob" Resche second. Captain Musset did not dive, due to an injury. The 220 yards was a race between Sadlo and "Toney," Sadlo winning in 2:01 seconds. Haber of Poly. won the plunge, scoring the only first for the Brooklyn college. He planked the entire 60-foot tank in the fast time of 27 1/2 seconds, breaking his own record. "Babe" Buser of Cooper did the same trick in 40 seconds, taking second, and "Pat" Slatower took third with 52 feet. The 60 yards breaststroke also posed a Cooper race, "Johnny" Epifania and "Sis" Dayton furnishing the opposition, with "Johnny" winning in 48 seconds. Next followed the 60-yard backstroke, which went to "Mike" Musset in 48 seconds. Poly. succeeded in scoring second.

On February 28th the team traveled to Middletown, Conn., and opposed the strong Wesleyan University team, losing 55-13. The team was greatly weakened by the loss of Duchemin, Fink and Slatower. The meet was so bitterly contested that Wesleyan was forced to break three of their college records. Our own Sadlo established a new record for the 100-yard breaststroke in 1:18 7/10 seconds. The previous tank record was 1:20 seconds. He also took second in the 220-yard swim, losing to Hopkins of Wesleyan by a foot, who swam the distance in the good time of 2:43 seconds. The meet opened with the 40 yards in which "Jack" Mollers, our mainstay in the sprints, after taking the lead in the first lap, lost his turn thus costing him a place. Brooks, the winner, broke the previous record when he made 1:15 1/2 seconds. The next event was the 220 yards in which Sadlo placed second. "Toney" Epifania, our other entry, swam his best 220 of the season and was beaten for third place by a yard. Wesleyan took first and second in the dive, with Beattie third. The inability of Resche to come up forced Captain Musset to dive with an injured ankle, and after the contest had to be assisted to his locker. The 100-yard record also went to the scrap heap, when Brooks of Wesleyan swam the distance in 58 3/10 seconds, beating his teammate, Howard, by a yard. Our entry, "Toney" Epifania, hung on desperately for three-quarters of the distance but his strength failed him in the final spurt. "Babe" Buser in the plunge could not do better than third, being off from, as he was only able to do 38 feet. The winner from Wesleyan planked the 60-foot tank in 27 1/2 seconds. "Mike"

Musset took third in the 100-yard backstroke, the Wesleyan man turning in 1.14½, missing another record by one-fifth of a second. The 100-yard breaststroke went to Sadlo in 1.18 7/10 seconds. The last event, the 100-yard relay, went to Wesleyan in the record time of 1.21 1/10 seconds, our team pressing them all the way.

On March 1st our team traveled to Yonkers and there engaged in a dual meet against the Yonkers Y. M. C. A., winning by a score of 44-18. Sadlo again came to the fore when he romped away with two first places and one close second, besides swimming his leg on the relay, in all amounting for 15 points. The meet opened with the 40-yard sprint which resulted in a practical dead heat between Sadlo and McDowell, the latter receiving the decision; time 21¼ seconds. The next event was the plunge which went to Magisheim of Yonkers with 50 feet. "Babe" Bauer could not do better than 56 feet, getting second place. The 100 yards followed, in which Sadlo and "Toney" Epifania placed first and third, respectively. "Toney," after trailing the field throughout the race, came up strong in the final lap and almost slipped the second man at the finish. "Sam" Beattie and "Bob" Rasche scored first and second in the dive, giving a good exhibition of fancy diving. The 40 yards breaststroke proved rather easy for Sadlo and "Johnny" Epifania, who scored another first and second, "Bill" winning by a yard in 28½ seconds. The 40-yard backstroke resulted in another first and second for Cooper, "Jack" Mollers and "Mike" Musset doing the trick; time 28½ seconds. The last event, the 100-yard relay, resulted in another victory for our team who won in 1.30½ seconds. Our relay team was composed of "Toney" Epifania, "Al" Fisk, "Jack" Mollers, and "Bill" Sadlo.

THE MERMEN

WILLIAM SADLO, JR.—"Bill" the star of the team, an all-round swimmer, whose best distances are the 220 yards and the 100 yards. "Bill" broke the Wesleyan tank record for 100 yards breaststroke after he had swum the 220 and 100 yards. "Bill" was also high scorer, scoring 36 points in four meets. As a talker "Bill" stands supreme.

SARAHIAN MURPHY—"Sch," our captain, and one of the old veterans, is the best diver Cooper has and can always be depended upon to dive his best. The shrinking violet has nothing on "Sch" in the line of modesty.

JOHN DUCHENEN—"Johnny"—One of the fastest swimmers on the team, anchor man on the relay and a fast 100-yard man. "Johnny" likes the water so much that he would rather swim than eat. In two meets he has scored 11 points.

ANTHONY EPIFANIA, JR.—"Toney" is the youngest brother of Manager Epifania and the smallest member of the squad. He is a regular on the relay and is second only to Sadlo in the 220-yard. Has scored 13 points; "Toney" and "Sam," when together, are the noisiest fellows in Cooper.

SAMUEL L. BRAYNE, "Sam," after Captain Musset the next best diver on the team. A good man under fire and dives best when competition is strongest. "Sam" is our noisiest teammate and the only female hopper on the squad.

JOHN MOLLERS—"Jack" is speedy Freshman who Coach McCloughlin says will develop into championship calibre. "Jack" is a member of the relay and swims a mean backstroke for short distance. "Jack" has scored 20 points.

ROBERT A. RASCHE, JR.—"Bob" The other diver, who, when in form, excels both Musset and Beattie, but "Bob" is erratic. When in form Rasche would make Annette Kellerman sit up and take notice. His only bad habit is inhaling poetry during the training period.

MICHAEL P. MURPHY—"Mike," The younger brother of "Sch," the coach says, will develop into first-class backstroke. "Mike" has done well this season and has scored one first, one second and one third in three starts. Like his brother he is a quiet fellow. Has scored nine points.

JOHN EPIFANIA—"Johnny," the other brother of the manager who, next to Sedla, is best in the breaststroke. Well, considering that this is his first year at breaststroke. Has scored eight points in three meets. His one ambition is to beat "Ed." Here's hoping.

CEDRIC L. DANTON—"Slim," another good breaststroke on the team, is a glutton for practice, and never misses one. His one ambition is to beat his teammate "Johnny" Epifania in the breaststroke, who, whether it's the 40, 100 or 200 yards, can always manage to beat "Slim" by a yard. In the Poly. meet Cody took second.

THOMAS L. BROWN—"Babe," the biggest and heaviest man on the team who makes "Babe" Rath look like a piggy against him, is the best plunger. At the Poly meet "Babe" plunged the 60-foot tank in 40 seconds. "Babe" is very modest and never boasts of his ability, but to get a few points on a submarine watch "Babe" in action.

HARRY SCHLAWER—"Fat," the only fat man on the team and as a plunger hopes to beat "Babe" in this event, but to date has had to take "Babe's" smoke, or whatever it is one takes while plunging behind anyone.

ALBERT FECK—"Al," a promising sprinter, who in the absence of Darchwin during the latter's sickness was a member of the relay. He is the Rudolf Valentino of the team.

NICHOLAS MATRO—"Spark" is assistant manager of the team, and is there when it comes to cheering. He obeys and follows Manager Epifania like Spark Plug does Barney Google.

AUGUSTUS EPIFANIA—"Angie," the super manager devices the rudders and propellers of the team and supplies most of the gray matter. He sports a hairy vest which matches his hairy chest except for color.

Summary of Meets of 1923

COOPER		OPONENTS
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NIGHT TRACK TEAM

Night Track Team, 1923

At the beginning of the season, several veterans from the preceding year reported for practice. Among these were Captain Joe Mullee, Abramson, Nolan and Krueger, all of whom performed well during the season. An abundant supply of good material improved conditions. Practice was held during the week at the Carmine Street Gym and the Seventy-first Regiment Armory.

Passel, a new man, proved a valuable asset to the team and easily held his own in the sprints. La Rosa improved with practice and furnished the big thrill in the Poly meet by romping away with the mile run in a final spurt. Cornish and Mindheim, the husky heavies, gave a good account of themselves in the shot put. In the two-mile distance Carthan has demonstrated his prowess in the dual meets, while Klawansky, with additional practice, will prove to be a good running mate. Since "Big John" Nuthes graduated, the high jump department has been noticeably weak. Carlson and Rohleder have the ability and with more tutoring will come across in proper style. Scheller, in the half-mile, showed promising signs. A number of new men had their first taste of intercollegiate competition in the Stevens and Poly meets.

Stevens at Hoboken, April 14th.

A bitter cold wind, which did much to hinder the limbering up of the squad, swept across Castle Field on that Saturday afternoon. Stevens overwhelmed Cooper by the score of 61-22. Cornish was the only man taking first place, when he won the shot-put event. Krueger was entirely off-form and managed to finish behind the winner in the broad jump. Passel did well in sprints, taking close seconds in both the 100- and 220-yard dashes. In the mile run La Rosa took second place.

Brooklyn Poly at Brooklyn, April 21st.

In marked contrast to the bitter cold prevailing at the Stevens meet, the weather was ideal for a track meet. Though Cooper was swamped by the Poly squad the result, 55-26, does not indicate the closeness of some of the events.

Poly's biggest surprise came when La Rosa, for Cooper, ran a heady race, completely outwitting the Poly duet and finishing a strong first in the mile run. Carthan, freshman football star, lost first place in the two-mile run by inches, despite the fact that he had been inactive due to an attack of the flu. Passel, in doing the 220 in 24 seconds, established a new Cooper record, but lost the honors to Griesman, Poly's star sprinter. Krueger easily took the broad jump, and Cornish received second honors in the shot-put.

Leading Scorers

Name	Points	Name	Points
Passel	12	Krueger	8
Cornish	8	La Rosa	8

TRACK PERSONALS

GEORGE KREUGER, the manager optimistic, once boasted that three men could win a dual meet. Up to the present date the three men in question have not been found. It is not yet known if George included himself. Here's hoping he will find the other two.

RED NOLAN—a plugger if there ever was one. His small size is offset by his courage. A firm believer in the motto "Eventually—but not now!"

THE MULLER BROTHERS, Joe and Bill, have the distinction of being the only men who have disrupted an A. A. meeting by the constant repetition of their names as they received their numerous medals.

ARTHUR CARLSON, the shrinking violet of the team, can always be depended upon in a pinch. Quite extraordinary how a man of his build can go up in the air so high, but then, "You can't keep a good man down!"

CHARLIE ROHELEDER, our other leaper, gets his practice, jumping on ferry-boats, coming from Jersey, after the second whistle has blown. Some day Charlie will miss and will be missed.

BERNIE PASSEL is of the opinion that running and Bersie are synonymous. His specialty is dashes, 100-yard, and away from other fellow's girls.

SAM CARTMAN is that calibre of man who helps boost Cooper spirit. In all exhibitions of the Spartans, none were known to run from the sick bed to the tape for second place, as Sam did in the Poly meet.

ART CORNISH, the huge shot putter, takes hold of a 16-pound shot and throws it baseball fashion. "Babe" Roth hits them out of the lot; Art throws them.

JULIUS MINDHEIM, Cooper's cave man, has not as yet realized his ambition of beating Cornish in the shot-put. Practice with the weights in physics lab. does not seem to help. Here's wishing you luck, "Mindy!"

ERNIE SCHELLER runs the 880 which is not an express, but like the Erie Ernie gets there just the same. Better luck next year.

MILT ARRAMSON, a good man, but he knows it. Milt is conspicuous at practice by his absence, but manages to turn out for the meets.

FRANK LA ROSA is best at the mile, and considers any distance under it, short. So if Frank answers any query as to distance with "Just a little way," you can be sure you are in for a halfmile jaunt.

Institute of Technology Track Team, '22-'23

B. C. EMMERICH, '25.....*Captain*
 VINCENT CASO, JR., '23.....*Manager*
 CARL H. HACK, '24.....*Assistant Manager*

THE Tech Track Team started its third year soon after the opening of school. Manager Caso sent out a call for men upon securing the Seventy-first Regiment Armory as a training center. The veterans, "Al" Duna, "Barney" Emmerich, "Charlie" Schwarzer, "Sid" Arnold, W. W. Meiers and an unusual large crowd of ambitious Freshmen began hard training for the coming indoor athletic meets, which indeed looked inviting (gold watches, loving cups, etc.)

The team entered several meets during the winter months and brought credit to itself by gaining several third and fourth places.

In the Tech Field Day, held about the middle of April at the P. S. A. L. field, the team showed the results of hard training, taking a good share of the honors in all of the events. Its members captured all the medals in the 100- and 220-yard dashes, and the half-mile run, while the Sophomore Relay, made up entirely of members of the Track Squad, took its event handily.

After the close of the season last April, a relay team made up of Duna, Arnold, Meiers, Schwarzer and Emmerich, in charge of Assistant Manager Hack, was sent to the Relay Carnival of the University of Pennsylvania at Franklin Field, Philadelphia. The team, being placed in a higher class than the previous year, found stiff opposition, but managed to gain fifth place in a field of nine.

Much credit for the good work done by the Track Team is due Manager Caso, whose advice and coaching were extremely beneficial during the crucial period of the men's training.

The 1923-24 season brings brighter prospects, having presented very good material from the Fresh Class. With new life, the Track Team seeks higher honors.

"Barney" Emmerich is the Beau Brummel of the track team, and he delights in winning medals and buying suits with vests that don't match.

"Sid" Arnold probably got his track experience running for the "stump dodger" mornings.

"Charlie" Schwarzer moved away from civilization out to the sticks of Jersey, which so depressed him in spirit that he is now no longer one of us but sojourns in the Night School.

"Al" Duna left us, too, but in the graduation route. Here's luck to "Al" from all.

Last but not least is "Silver Heels" Meiers, a track man of no mean ability and a man's man among us fellows.

Wearers of the "C"

NIGHT FOOTBALL

Varsity "C"

A. W. Carlson, '21, '22, '23.	R. E. Lowe, '21, '22, '23.
S. D. Carthan, '22, '23.	L. Mack, '21.
N. S. Clancy, '22, '23.	J. Mindheim, '22.
A. Cornish, '22, '23.	F. Naujock, '23.
A. Epifania, '21, '22, '23.	J. H. Naujock, '21.
L. D. Fidelgolta, '21, '22, '23 (Capt. '24).	C. H. Osgood, '21.
C. Froshan, '23 (Manager), '21 Minor Letter.	H. Pelton, '22.
T. K. Garry, '22, '23 (Capt. '23).	C. D. Powell, '21, '22, '23.
J. V. Hall, '21, '22 (Capt. '21).	J. Ryan, '23.
C. A. Hayne, '21, '22.	J. J. Reinhardt, '21, '23.
A. G. Hebling, '22, '23.	N. L. Shamroy, '21.
W. Holler, '23.	H. W. Stern, '21.
J. F. Jessick, '21.	F. Svuger, '23.
F. Kixis, '23.	L. C. Weinstein, '21, '22.
A. H. Kepp, '21, '22 (Manager).	E. Whitney, '23.
E. Lawrence, '22, '23.	H. G. Wickland, '21, '22, '23 (Capt. '22).
N. Lewis, '21.	S. L. Beattie, '23 (Minor Letter).
	J. Epifania, '23 (Minor Letter).

NIGHT BASEBALL

Varsity "C"

S. Boderka, '22.	T. F. Gilligan, '21, '22.
M. H. Breakstone, '20, '21.	A. H. Hotopp, '20, '21, '22.
M. M. Breslow, '20, '21, '22, '23 (Mgr.)	J. F. Jessick, '21.
R. J. Budrick, '21, '22, '23 (Captain).	H. Katz, '20, '21.
J. V. Cleary, '20, '22, '23.	D. Moran, '23.
G. De Angelis, '22, '23.	W. Scholz, '23.
G. F. Doy, '20.	R. Suarez, '23.
E. A. Duncanson, '22.	H. F. Turner, '21.
T. Foley, '22.	J. Van Sickle, '23.
G. H. Frosh, '20, '21, '22, '23.	P. J. Walsh, '20, '21, '22, '23.

NIGHT BASKETBALL

Varsity "C"

C. Arcone, '19, '20.	H. Rear, '20 (Manager).
V. Arillo, '19, '20, '22, '23.	M. Rosso, '18, '19, '20, '21, '22, '23.
A. Ehrlich, '19, '20.	O. Seguso, '23 (Minor Letter '21, '22).
L. D. Fidelgolta, '20, '22, '23.	L. Solotaroff, Minor Letter '21 (Mgr.)
S. Hoffman, '22, '23 (Minor Letter) '20, '21.	
N. Ludwig, '18, '19, '20, '22, '23 (Capt. '23).	H. L. Spiro, '15, '18, '19, '20, '22 (Capt. '18), (Mgr. '19).
J. A. Mathes, '20, '21, '22.	E. Twarosch, '22.

Minor Letter

S. Hasen, '21, '22, '23.
C. Buchman, '23.
E. Fioretti, '23.
W. Glessoff, '23.
A. Glover, '23.
E. Lawrence, '21, '22, '23.
J. Miloch, '21, '22.

C. W. Miller, '23.
J. Miller, '21, '22.
N. Penna, '23.
H. Strothkamp, '23.
R. Suarez, '23.
L. Vieth, '23.
W. F. Vieth, '23.

NIGHT SWIMMING

Minor "C"

W. H. Albert, '23.
T. Anderson, '23.
S. L. Beattie, '23.
T. Buser, '23.
Aug. Epifania, '23.
A. Epifania, '23.
J. Epifania, '23.

G. Gottron, '23.
W. Lang, '23.
A. A. Mittag, '23.
S. Mussett, '23.
R. Resche, Jr., '23.
I. T. Zuckman, '23.

INSTITUTE OF TECHNOLOGY BASKETBALL

W. Albert, '23, '24.
P. Becker, '15.
*J. Bossert, '20, '21, '22 (Capt.).
E. Brooks, '21.
H. Cook, '16, '17.
E. Cramer, '15.
B. Diamond, '21.
E. Dixon, '15.
M. Gold, '20.
J. Grabiec, '23.
S. Grey, '15, '16.
G. Griffiths, '21.
W. Hammond, '22.
A. Jacits, '18 (Mgr.).
H. Koren, '21 (Mgr.).
M. Magin, '20.
R. May, '15.
*J. Meier, '19, '20, '21 (Capt.).
J. Merquelin, '18.
J. Mero, '20 (Mgr.).

J. Miele, '22.
*A. Onderdonk, '17, '18, '19 (Capt.).
*S. O'Regan, '16, '17, '18 (Capt.).
W. O'Regan, '17, '18.
A. Prince, '22, '23 (Capt.).
L. Rabbage, '15 (Mgr.).
*H. Rhodes, '19, '20, '21 (Capt.).
*P. Reiss, '21, '22, '23.
E. Russel, '21.
J. Sayer, '23.
L. Schwartz, '22 (Mgr.).
C. Siegel, '22.
H. Spiro, '15.
*S. Sprung, '18, '19, '20.
R. Stevenson, '15.
H. Thompson, '22, '23.
G. Thorpe, '17.
C. Titus, '17.
*T. Tynan, '18, '19, '20.
M. Weissberg, '22, '23.

*Wearer of the gold basketball emblematic of 3 "C's."

*Wearer of the silver basketball emblematic of 2 "C's."

NIGHT TRACK TEAM

Minor "C"

M. Abramson, '22, '23.	J. Mathes, '22.
A. W. Carlson, '23.	J. Miedheim, '23.
A. Cornish, '23.	J. Muller, '22, '23.
J. E. Cruickshank, '22.	W. R. Muller, '22, '23.
J. M. Daffron, '22.	F. Nolan, '22, '23.
H. Hixon, '22.	B. Paasch, '23.
B. H. Joseph, '22.	C. Rohlleder, '23.
F. Kappelsohn, '23.	C. Senor, '22.
C. G. Krueger, '22, '23 (Mgr. '22, '23).	H. L. Spiro, '22.
F. La Rosa, '23 (Mgr. '24).	

INSTITUTE OF TECHNOLOGY (DAY) BASEBALL

E. Abberley, '15 (Mgr.).	†D. Moore, '21, '22, '23.
G. Acebes, '23.	S. O'Regan, '18 (Mgr.).
A. Barrus, '15.	W. O'Regan, '17, '18 (Capt.).
E. Baron, '23.	W. Prime, '23.
J. Bossert, '21 (Capt. '22).	L. Rannow, '15, '16.
E. Carbone, '21, '23.	A. Ratxan, '21.
†V. Caso, '21, '22, '23.	H. Rardin, '18.
F. Cisma, '16, '17 (Mgr.).	N. Richfield, '15, '16.
A. Colledge, '21.	†P. Reina, '21, '22, '23.
H. Cook, '17.	H. Rosen, '18.
G. Cowen, '15, '16.	A. Schoenbaum, '15, '16.
*C. Dickerman, '15, '16, '17 (Capt.).	H. Schapiro, '21.
A. Dona, '23 (Mgr.).	G. Schiffer, '22 (Mgr.).
B. C. Emmerich, '23.	S. Sprung, '17, '18.
A. Ghirardi, '21.	C. Storzinger, '21.
*S. Goldman, '15, '16, '17 (Capt. '18)	H. Tatnell, '23.
N. Guttman, '17, '18.	B. Welcher, '17.
L. Heulin, '18.	J. Welch, '22, '23.
H. Kats, '21.	A. Westenberger, '21.
L. Lazarus, '17.	*S. Wiltse, '15, '16, '17.
A. McCaffry, '21 (Mgr.).	T. Yamin, '15.
J. Miele, '23.	

*Wearer of the silver baseball emblematic of 3 "C's."

†Wearer of the gold baseball emblematic of 3 "C's."



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Field Day, 1923

UNDER the management of a committee headed by Eric Hasse, the third field day of Cooper was held at Pelham Bay Park. Favorable weather conditions prevailed and permitted a lively contest of the many events.

The meet was started rather late, but those who arrived early enjoyed lunch in the shaded woods, or rather enjoyed the lunch she brought. It was shortly after noon that the park became crowded with athletes, Cooperites and throngs of interested spectators.

In the short dashes, 50 and 100 yards, it seemed like a contest between M. Abramson, of the fourth-year class of General Science, and B. Passel, of the first-year class of Electrical Engineering. Each gained a first and second in each event. The 100-yard dash was done in the fast time of 10 $\frac{4}{5}$ seconds by Abramson. Passel took a first in the 220-yard event, with B. Kurtz trailing, and Abramson a close third.

J. Muller, of the third-year Chemistry Class, starred in the "440" and "880," taking a first in each run. W. LaRosa, of the same class, inspired by Muller's feats, captured first place in the mile run.

The most exciting and hotly contested event was the interclass relay. The third-year class of General Science won this event in the time of 1 minute 45 $\frac{3}{5}$ seconds. The team consisted of Adasio, Dayton, Herkowitz and Lang.

The field events were evenly divided, George Krueger, of the fourth-year class of General Science, romped away with the running broad jump, and the running hop, skip and jump, adding ten points to his class total. E. Lawrence showed that he could throw a discus as well as he can a football, and won this contest with a throw of 75 feet 5 inches.

After the dust had cleared away it was found that the fourth-year class of General Science had captured the point trophy with 24 $\frac{1}{2}$ points. The first-year class of Electrical Engineering was second with 22 points, and the third-year class of Chemistry was third with 20 points.

Of the individual stars, M. Abramson scored heaviest, with two firsts, two seconds and a third for a total of 14 $\frac{1}{2}$ points; B. Passel was a close second with two firsts and a second, a total of 13 points; J. Muller was third with 10 $\frac{3}{4}$ points, followed by G. Krueger with 10 points.

The outlook for the field day of 1924 is excellent. The program outlined by W. LaRosa, manager of this year's track team, is both promising and ambitious. Only the support and combined efforts of the student body can make this event a decided success.

"Looking Backward"

"WITH the year nearing its end the various social activities quietly took back seats, making room for the more serious preparations for the final exams and * * * " Thus did the CABLE of 1923 end its annual review. The stars were meant to convey the idea that the review was completed. However, we'll let you in on the secret, the printer had to have his stuff. Before the last scholastic year was over great changes were wrought. It therefore behooves us to take up the tale from the stars.

On March 29th the entire school regretfully heard that Prof. Richards had resigned his directorship of Cooper Union, after fifteen years of activity in this Institute, wherein, with his unusual talents, he accomplished the splendid work, which left its mark on the college. His parting farewell was, "It is with keen regret that I am severing my connection with the Institute before the end of the school year. I regret, too, that I cannot meet you face to face and say a word of parting, but circumstances force me to take this means of saying a last word to you, and that is a most sincere wish that you obtain the full measure from the Institution that Peter Cooper founded and that your stay within its walls will bring you something of the spirit that animated him."

The Engineering societies held their second annual joint meet. Prominent was the address by Elmer A. Sperry of Japan's remarkable progress in Engineering. J. N. Waldron, I. R. T. Engineer, described the interlocking signal system, as used in modern subtransit.

The League show and dance was declared to be the biggest and finest ever, with an attendance of over seven hundred and fifty couples.

Reinhardt was elected president of the C. U. S. L. Orner, Whitney, Dulberg and Leder were the other officers.

Mr. Pickett gave the Math. Club something to ponder over when he showed his original method of trisecting an angle.

As the year wound itself out, elections of all kinds presented themselves. Grabiec was chosen to lead the Day Tech basketball team. Ludwig was re-elected to captain the nocturnal five. Ebert was chosen to head the Pioneer Staff. Thatcher became business manager.

Of such worth were the posters entered in the C. U. S. L. contest, that the *New York Herald* gave them some space in its art section.

OCTOBER.

The recording angel having turned over another leaf, everyone eligible returns, all pepped up to renew their struggle for knowledge and the year starts. By-gones are by-gones. Outlooks are fresh.

Professor Hartmann, as acting director, bids a hearty welcome to the student body on behalf of the Faculty and the instructing staff.

We receive belated news of the Summer activities, among which is that G. S. '24 was high marker in the Annual Field Day. The Class of 1923 were the winners of the bronze plaque given at the Day Tech Field Day. The Newman Club reports four vacation meetings. Its June meeting took place at the estate of Miss Ward. The members were enabled to go in bathing off the backyard. The estate proved of interest, historically as well as botanically.

Professor Byers, in his interesting and learned manner, depicted his observations, made while touring Europe during the summer.

Bloomsgarden's husky Eleven suffered two defeats, each from saintly teams, St. John's and St. Joseph, with the score of 19-0 in both games.

NOVEMBER.

A month of crispness, a harbinger to the coming Winter, a football month. The last was especially true, for our Eleven piled up five victories. The first was over a light and fast team from Manhattan College. No scoring was done until the last quarter, when Captain Garry made a drop kick from the 37-yard line. Seton Hall was next in line to be taken in on November 2d. The score was 7-0. Continuing their victorious advance Cooper blanked Webb Institute, tallying 18 counters. Keeping up their blanking tactics and increasing their scores, the Maroon and Gold sent the New York Aggies back to Farmingdale bearers of a 23-0 defeat. As their last game of the season and upon a slushy field, Cooper's Eleven brought home an 18-0 victory from Keanworth over Upsala College.

The Day Tech A. A.'s rally was conspicuous for the spirit displayed which was enhanced by a heart to heart talk from Prof. Ray C. Brumfield. The C. U. S. C. installed its new officers on the nineteenth. These were in the usual order: Thompson, Samson, Hymes and Dean. At its Thanksgiving entertainment the C. U. S. C. broadcasted a special program from Station C. U. I. T.

The *Pioneer* bereaved with the world of science the premature death of the electrical wizard, Charles Proteus Steinmetz.

Mr. Rose, a Hindu mental marvel, demonstrated his remarkable powers of concentration, as a fitting opening to the Math Club's activities. An adding machine checked his calculations when within its scope. A busy session of the Math Club, combined the adoption of a Constitution and a talk on "The Theory of Numbers" as formulated by Mr. Obergfeld. A method used by Russian peasants in their arithmetic calculations proved of unusual interest as explained by Mr. Lobkin.

"Economics of Engineering" was an absorbent topic as presented by Mr. Harrington, national president of the A. S. M. E. Prof. Toch, speaking before the Chem Club, enumerated the advantages of entering the field of Commercial Photography. Under the same auspices, Mr. Pierce M. Travers, a Cooper Alumnus, interestingly lectured on a "Theory of Emulsions."

The C. U. S. L. finds itself in a turmoil, resignations are pouring in, followed by reinstatements.

Washington Square College succumbed reluctantly to the Tech's quintet after a hard struggle by a 25-21 score.

DECEMBER

Prof. Morecroft of Columbia University and a prominent authority on radio communication, entertained, interested and instructed a willing group who were present at the A. I. E. E. meeting on December 10th. The "Effects of Radio on General Engineering" and a concept of "Negative Resistance" was a revelation to many.

Victor Bloede, '65, who recently equipped a laboratory room bearing his name, continued his generous contributions by adding a magnificent Friese thermostat and made possible a system of air suction and pressure.

In its inaugural basketball game the Cooper Night quintet conceded Brooklyn Poly a two-point lead. The Juniors softened the Varsity's defeat by winning their game from Poly Prep. 30-24 was the good news. State Teachers' College

and the Albany College of Pharmacy fell victims to the Maroon and Gold's constantly improving basket tossers. During the Christmas holidays four games were played by the Night against fives from Princeton-Nassau, Crescent A. C., St. John and the Brooklyn College of Pharmacy. St. John's eked a one-point win, Princeton-Nassau a three-point one. The Brooklyn College came out on the light end of 39-30 in a fast and rough flurry. Crescent A. C., playing at its top season form, outpointed Cooper's quintet, 55-25.

St. Francis' powerful basketball outfit defeated the Day Tech on the ninth.

Mr. Duncan talked on the decimal point and its practical convenience before the Math. Club.

JANUARY.

A large number of Art Students were attracted to listen to Prof. Toch speak on "The Chemistry of Artistic Paintings."

An odd problem, that of a nine-point circle, was made ordinary and easy as presented by Mr. Miller of the Math Club.

Mr. O. S. Gerden, '20, came around and with the aid of graphs and charts imparted to those attending the A. S. M. E. lecture some knowledge on "Developments in the Art of Power Generation." Major Logan, an ex-Arctic explorer, spoke on modern exploration, particularly on the engineering condition of the Far North.

The so-called, sedate Seniors made merry at the Hotel Plaza as part of their once-a-year dance.

Flashing some fine team work our Night fivers downed Brooklyn C. C. N. Y. From Pennsylvania came the speedy and fighting Lafayette five to trim our Varsity, after the latter had led in the first half. A double header and a double victory was scored against Cathedral College and Prep by Cooper's two aggregations. A week later the Y. M. H. A. was beaten.

Playing a return game, the Day Tech quintet allowed the New York Aggies to wrest this game from them by a solitary point. Upsala was again bettered in a return encounter.

Cooper's natators outswam Walkill Club on the twelfth.

Medals were presented to the winners of the field day at the C. U. S. L. social meeting.

FEBRUARY.

"League must reorganize or go out of existence," headlines the *Pioneer*. This ultimatum being delivered by Dean Hartmann at the League's first February meeting.

A record meeting was held by the A. I. E. E. Student Branch, when Mr. Wilkins, commercial manager of the New York Telephone Company, in conjunction with much scenery and the assistance of two rather comely females, demonstrated how and why one should obtain from blasphemous license when waiting for a number.

Peter Cooper's memory was honored by an enthusiastic assemblage in the Physics Lecture Room. Mr. Riedel, making the principal address, outlined the long and fruitful existence of the Founder of the Institute. In the same vein was the Banquet of the Federated Alumni Societies of Cooper Union.

The Debating Class argued on "Resolved, That the City of Greater New York Be Admitted to the Union as a State," at its midwinter entertainment on the ninth.

"Catalysis and the Hydrogenation of Oils" was the topic of a highly technical talk by Dr. Wesson at an open meeting of the Chem Club.

N. Y. U. (Wall Street) were outplayed 32-9 in their tilt with the Day Five. Savage Institute scalped the Night warriors by a few free throws made at critical moments. Both the Day and Night quintets bowed to St. Francis and Newark Normal, respectively. Ever a nemesis to Cooper teams, St. Francis chalked up the best part of a 45-29 point score against the Night. In another game with Brooklyn College of Pharmacy the Maroon and Gold repeated their previous victory by an increased score of 39-34.

Tankers from Wesleyan University were obliged to break two of their own pool records in order to down the Cooper swimmers. A third record was broken by Sedlo, who outstroked Dunn from Wesleyan.

A fine showing was made by the Day Track at a meet under the Wiley A. A.'s auspices.

Both Day and Night Interclass Tournaments started with unprecedented rushes. The Day Sophs were declared champion twirlers, defeating the Juniors, 27-11.

The report is made that due to the inability of a few loquacious gentlemen to be present the League held its shortest meeting. Eighteen minutes.

When the Juniors Promenaded, they lived up to and surpassed advanced notices, which is going some.

MARCH.

With increasing rapidity did the events kaleidoscopically march onward. On the first, combining with Stevens Institute, the C. U. Chapter of the A. S. M. E. held a joint meeting at which Mr. Thomas E. Keating, a prominent Engineer and authority on power plants, detailed "Some Observations on European Power Plants."

An ever baffling and intricate problem was made a little less incomprehensible by Mr. Fankuchen, who produced a simple instrument invented by a blind priest for the mechanical trisection of an angle. Mathematically correct, this instrument was based on one of the complex curves under discussion.

A triple victory featured the first week of this month. Our Mermen trimmed Yonkers Y. M. C. A., 44-18. N. Y. U. (Wall Street) was easily disposed of by the Night Five, while the Tech repeated over Upsala. Unfathomable are the wiles of destiny. The Tech quintet, having smeared up N. Y. U. (Wall Street) on the second ultimo, were in turn beat up by a well defined 29-11 score. Participating in the P. O. meet the Day Track managed to place in the semi-finals.

All pessimistic opinions which had theretofore flourished were swept aside when the Day Tech Dance at the Waldorf turned out to be a great success, socially, financially, girligally.

Mr. Scott, of the General Electric Co., speaking before the A. I. E. E., dwelt on the knowledge of service conditions in selecting electric motors in the industries.

G. S., '24, was crowned the undisputed basketball champs of all the Night classes.

Day or Night? Night or Day? flashed forth the annual cosundrum, but unfortunately both could not win. It was the Night that overshadowed the Day in a highly tensed game of stiff opposition.

What's that, the printer is clamoring for his stuff? Well, let him wait. Oh, well then, all right, all right, but one more sentence please. We gaze upon our palm and try to read therein how successful the C. U. S. L. affair will be. And er—er— Oh here, boy, and rush the proofs. *An revoir.*



Fraternities



Omega Delta Phi

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Francis P. Carey
Karl Hauptmann

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Lambda Sigma Kappa



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Founded 1904

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Sigma Tau Rho

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Progress

IT is hard to believe that THE CABLE of Cooper Union has been in existence for but two years. The manner in which it has progressed is little short of marvelous. It has already taken its place in the better class of year books published by colleges and other educational institutes. As a work of art we can proudly say, it is difficult to find one which outclasses it in that respect.

The problem of publishing a year book is no small one under the most favorable circumstances, and especially is this so under the conditions which exist at Cooper Union, where the majority of the students are enrolled in the courses given at night.

THE CABLE of 1922, the pioneer edition of our year book, stated that THE CABLE itself had been created to fill the long felt need in Cooper Union of a book published jointly by the students of the different schools at the close of the school term, in which should be recorded the history of our school during the past year. It was endowed with the spirit to further the coöperation of the schools of Cooper Union, thus promoting the loyalty of a united student body, and with the purpose of preserving in proper form the chronicles of our school.

It is quite evident that even better coöperation of the student body that has existed in the past, has been obtained to a great extent through THE CABLE. The book itself is sufficient evidence for proof. Were it not for the coöperation of the schools as a whole, this year book would not have made the progress it has. It would not have had its inception were it not for this. A year book cannot hope to be published by a few individuals working alone. Individually and collectively the students have helped toward making THE CABLE a success, with what results we ask you to judge for yourself.

Our experimental stage, the bane of every new publication of this type, and which usually takes quite some time to pass, was short lived. One year's editorial staff passes along the knowledge they gained to the next year's staff, and so the time lost each year, due to the new staff becoming accustomed to the ins and outs of their duties is now used to better advantage. Numerous other schemes are employed to the effect that the staff can now concentrate their efforts on those more important problems attendant to the publishing of our year book, the time-wasting preliminaries, etc., being entirely done away with.

The staff of THE CABLE of 1924 wishes to take this opportunity of acknowledging its indebtedness to both Mr. F. Ehrlich, who personally supervised the art work to be found in these pages; to Mr. W. J. Pickett who, as faculty advisor, lent his more mature judgment toward the solution of the problems which arose; to Mr. Wm. L. Schilling, who gave us his professional advice in regard to the printing, etc., and to the White Studio who handled the photographing so ably and artistically. We desire to express our gratitude and appreciation to them as well as to all those who so freely helped in the editing of this book.



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MAURICE ZIMMERMAN
120 W. 120th St., New York City

ELECTRICAL ENGINEERING—1926

G. ACKERT
Mills Ave., Springfield Gardens, L. I., N. Y.
IRVIN APPEL
222 Mulford Ave., Jersey City, N. J.
KENNETH C. BECKETT
24 Jerome St., East Orange, N. J.
CHARLES BROWN
2118 10th St., Brooklyn, N. Y.
THOMAS J. COX
201 Tenth St., Elmhurst, L. I., N. Y.
WILLIAM A. CHITCHELY
1222 Chalmers Ave., New York City
RICHARD ENGELKE
222 Franklin Ave., Poughkeepsie, N. Y.
SAMUEL FRINGOLD
1242 E. Fourth St., Brooklyn, N. Y.
MOHRIE FELDMAN
2241 Webster Ave., New York City
EDWIN FINEY
1274 49th St., Brooklyn, N. Y.
IRADORE FRANKEL
12108 107th Ave., Richmond Hts., N. Y.
PETER GOULD
127 East St., Brooklyn, N. Y.
GUSTAVE GUTTHON
2227 Duane Ave., New York City
PATRICK J. HARRINGTON
1124 Park Ave., New York City
JOSEPH A. HARTE
222 E. 140th St., New York City
FRANK X. HAYES
122 E. 22d St., New York City
CHARLES A. HAYNE
2242 E. 12th St., Brooklyn, N. Y.
MAX HOROWITZ
112 Barrett St., Brooklyn, N. Y.
SAMUEL HOROWITZ
112 Barrett St., Brooklyn, N. Y.
GEORGE J. JACKSON
244 Lewis Ave., W. New Brighton, S. I., N. Y.
WILLIAM JOSEPH
Ocean Ave., Bayside, L. I., N. Y.

JOSEPH KAHN
2222 Linden St., Brooklyn, N. Y.
JULIAN LEVINE
177 Lee Ave., Brooklyn, N. Y.
J. E. LAND
227 Linden Ave., Brooklyn, N. Y.
VINCENT MARCHESE
241 Myrtle Ave., Brooklyn, N. Y.
ROBERT MARTIN
2222 Washington Ave., New York City
JOHN B. MEKKA
40 Berpes Ave., Jamaica, L. I., N. Y.
FRED H. MILLER
2222 Manhattan Ave., New York City
JOSEPH MONACO
201 Bay 12d St., Brooklyn, N. Y.
ABRAHAM PALLEY
1027 E. 127th St., New York City
FRANK PAPARAK
Woodside, L. I., N. Y.
SOLOMON PODGAIN
422 Leonard St., Brooklyn, N. Y.
STEPHEN J. POWERS
2210 Washington St., Hoboken, N. J.
IRAD B. RAFFINE
224 W. 11st St., New York City
JOSEPH WALTERS
221 E. 127th St., New York City
NAT. SHAUB
222 Prospect Ave., New York City
GEO. K. SAUL
222 W. 104th St., New York City
RAYMOND F. SOUTHERS
221 W. 21st St., New York City
KERRY W. STANN
212 W. 22d St., New York City
THOMAS H. THOMSON
222 Second Ave., West Hoboken, N. J.
JOHN B. THOM
Central Branch T. M. C. A., Brooklyn, N. Y.

ELECTRICAL ENGINEERING—1927

- A. ANTNER
214 W. 27th St., New York City
- B. BABONIG
78 E. Avenue St., New York City
- WM. C. BECKMAN
1182 Rockaway Ave., Brooklyn, N. Y.
- GEO. JOH. BENNINGER
20 Wilbur Ave., Long Island City, N. Y.
- PETER BRUCE
22 Van Wyck Ave., Jersey City, N. J.
- ALFRED CADAYERO
434 E. 218th St., New York City
- JOHN F. CANGEMI
10 Schuyler St., Brooklyn, N. Y.
- VINCENT E. CANNIDY
24 Palumbo St., Brooklyn, N. Y.
- N. J. CLANCY
722 Union Ave., New York City
- FRED CLARK
28 Manhattan Ave., Jersey City, N. J.
- ARTHUR CONNOR
428 E. 142nd St., New York City
- ROBERT KINICKE
7812 Galen Ave., Brooklyn, N. Y.
- GEORGE FOY
10 Euclid St., Brooklyn, N. Y.
- ALVIN CHARLES GARY
210 W. 128th St., New York City
- STEPHEN W. GATRY
408 E. 142 St., New York City
- H. W. GEIS
424 E. 144 St., New York City
- JOHN JAMES GEMMILL
338 E. 198th St., New York City
- L. GROPER
197 Bay 28th St., Brooklyn, N. Y.
- CHARLES W. HAIGHT
227 W. 125th St., New York City
- JACOB HALPERN
297 Rockaway Ave., New York City
- HERBERT HARRIS
2300 Croton Ave., New York City
- LOUIS HEED
411 Greene Ave., Brooklyn, N. Y.
- WM. HOLLES
188 22d St., Jackson Heights, L. I., N. Y.
- ABRAHAM HOLZER
428 E. 81st St., New York City
- M. H. HUNT
180 Myrtle Ave., Jersey City, N. J.
- GEORGE KILLOOG
491 E. 128th St., New York City
- ELIAN KRANNOFF
188 Avenue C, New York City
- ISRAEL KOMAROWSKY
141 Belmont Ave., Brooklyn, N. Y.
- GERALD LA POLY
4 W. 122nd St., New York City
- MAX LUDKE
180 Amsterdam Ave., New York City
- THOMAS MARINO
412 Clinton Ave., Brooklyn, N. Y.
- LEO MARKS
28 Avenue D, New York City
- HAROLD MAY
2247 Palumbo St., Brooklyn, N. Y.
- FRANK McENANY
27 Kingsland Ave., Brooklyn, N. Y.
- JOHN J. MEADOWS
128 Eastman Ave., Yonkers, N. Y.
- CARL MEYER
141 E. 24th St., New York City
- M. F. MESSINA
180 W. 142d St., New York City
- JOHN MENZAR
237 E. 184th St., New York City
- OTTO L. MICHAL
1414 Avenue J, New York City
- CARLILE WM. MILLER
2 E. 187th St., Elizabeth, L. I., N. Y.
- L. E. MONTECI
808 W. 124th St., New York City
- PERRY MOUNTAD
182 E. 124 St., New York City
- C. F. OLLINGER
184 E. 184 St., New York City
- EMIL D. OTTO
2212 Coxsack, New York City
- BERNARD PASSERL
184 E. 117th St., New York City
- J. S. PATTERSON
2128 20th St., Woodhaven, L. I., N. Y.
- RICHARD C. PFANNER
124 Avenue St., Randall Park, N. J.
- CLARK H. POOL, JR.
1722 E. 22d St., Brooklyn, N. Y.
- FRED WM. POPPE
1287 Avenue J, New York City
- HENRY M. READ
618 E. Jersey St., Elizabeth, N. J.
- G. E. REITTER
278 Hudson Road, New York City
- WILLIAM F. RIEDELL
208 Cooper St., Brooklyn, N. Y.
- THOMAS M. RIORDAN
221 Perry St., New York City
- ROGER D. ROAKE
10 E. Oxford St., Brooklyn, N. Y.
- A. ROCHAU
148 Manhattan Ave., New York City
- DONALD ROBERTSON
123 E. 123rd St., New York City
- JOHN M. RAPPAPORT
12 Union St., Elizabeth Park, N. J.
- JOHN F. SCANLON
282 Riverside Place, New York City
- FRED SCHLOTTMANN
247 Throop St., Brooklyn, N. Y.
- WALTER SHANNON
1429 Jefferson Ave., Brooklyn, N. Y.
- GEO. F. SOHMER
77 Seneca Ave., Hempstead, N. J.
- RYEN STROMBERG
808 2nd St., Brooklyn, N. Y.
- HARRY TRACHTMAN
224 E. 24th St., New York City
- WM. K. TRAUTMAN
43 E. Third Ave., New York City
- DOUGLAS H. WETMORE
410 W. 148th St., New York City
- H. T. WILHELM
25 Lincoln Place, Brooklyn, N. Y.
- THOMAS H. YOUNG
704 Montague St., Brooklyn, N. Y.

ELECTRICAL ENGINEERING—1928

- JAMES F. BIRCLAY
4918 Broadway, New York City
- JOHN THOMAS BARTLETT
1942 140th St., Brooklyn, N. Y.
- LEONARD RALPH BERTS
Bergenline Road, Eastwood, N. J.
- ARTHUR H. BITTER
1844 Irving Place, Elizabeth, N. J.
- GUSTAVE BLUMSTEIN
1488 Southern Boulevard, New York City
- ROBERT W. BOGUMIL
821 E. 49th St., New York City
- WILLIAM J. BORN
44 E. Second St., Brooklyn, N. Y.
- RICHARD BORNEN
348 W. 224th St., New York City
- FRANKLIN R. BOSSMANN
1122 Lafayette Ave., Brooklyn, N. Y.
- SIMON FRANK BRUNO
822 Atlantic Ave., Brooklyn, N. Y.
- ROSARIO BUCHERATI
212 E. 27th St., New York City
- MAX BUCHLER
1724 Amsterdam Ave., New York City
- HUGO W. BUNCH
1 W. 70th St., New York City
- HENRY W. CAMERON
35 Berthel Place, New Rochelle, N. Y.
- JAMES CAPECOTH
3809 109th Ave., Brooklyn, N. Y.
- SAMUEL CARTMAN
101 Union St., Brooklyn, N. Y.
- GASTANO CIRINO
1221 Second Ave., New York City
- FRANK COGOLARE
822 Broadway St., Dubuque, N. Y.
- EDWIN CUTLER
17 Ocean Ave., Astoria, N. J.
- EDWARD P. DELANEY
100 W. 21st St., New York City
- JAMES DENARDO
128 Prospect St., Newark, N. J.
- RAYMOND C. DE VET
247 Manhattan Ave., New York City
- JOSEPH X. DIOLENTONE
249 Chatter St., Brooklyn, N. Y.
- CHARLES ELSTE
228 Jersey Ave., Elizabeth, N. J.
- GEORGE K. ESPERSEN
404 Lincoln Ave., Great Neck, N. Y.
- ALBERT FEATHERSTONE
238 Park Ave., New York City
- WILLIAM J. FOX
178 Manhattan St., Brooklyn, N. Y.
- IRVING FREED
237 Waverly St., Brooklyn, N. Y.
- IRVING FRIEND
47-48 E. Third St., New York City
- GEORGE FRIEDL
272 Third Ave., Astoria, N. J.
- WALTER FRITSCHI
2 81st St., Woodside, L. I., N. Y.
- GEORGE GAVIN
817 W. 124th St., New York City
- HERBERT J. GODDARD
427 47th St., Brooklyn, N. Y.
- ALFRED GORMAN
Schenectady, N. Y.
- V. X. GRIFFIN
824 E. 160th St., New York City
- JOHN RAYMOND HEFFEL
228 E. 124th St., New York City
- BRUCE HERBST
812 Maple Ave., Brooklyn, N. Y.
- LEWIS HERNIMAN
20 W. 120th St., New York City
- ERIC HOLMGREN
3008 51st Ave., Brooklyn, N. Y.
- MARTIN J. HYATT
269 W. 12th St., New York City
- ALEXANDER L. JAFF
Harriet Ave., New 29, Manassas, N. J.
- ALEXANDER JOHNSON
228 Avenue A., Brooklyn, N. Y.
- JOSEPH A. JOSEMAN
282 Cedar Ave., Jersey City, N. J.
- DANIEL JAMES KENNELLY
421 Central Park W., New York City
- RAYMOND W. KENNEDY
4123 108th St., New York City, N. J.
- LOUIS W. KESSLER
414 St. Prospect Ave., Newark, N. J.
- JESSE E. KETTEL
830 Klatsford Ave., Brooklyn, N. Y.
- JOSEPH KIRCHENBAUM
88 Lewis St., New York City
- OSCAR KLOTZ
43 Orchard St., Bridgefield Park, N. J.
- EDWIN A. KRANTZ
1408 Fulton Ave., New York City
- CLEMENT A. KROGER
214 S. 10th Ave., Mt. Vernon, N. Y.
- CHARLES P. LANGFORD
1208 E. 12th St., Brooklyn, N. Y.
- RODOLPHE G. LAURENCE
Kinslandmont Road, River Edge, N. J.
- IRVING H. LEVY
464 Bushwick Ave., Brooklyn, N. Y.
- DONALD J. MACDONALD
2608 Fulton St., Brooklyn, N. Y.
- FRANK MALINOWSKI
17 Wilbur St., Manassas, N. Y.
- THOMAS V. MALLORY
82 Amsterdam Ave., New York City
- HOMER ELBRIDGE MARTIN
28 East Charles Place, New York City
- GENE M. MATSUJIMA
224 E. 109th St., New York City
- ROBERT MISTWICH
1002 Flatbush Ave., Brooklyn, N. Y.
- JOHN A. MOLLER
288 E. 144th St., New York City
- FRANCIS M. MOLOSNEY
1029 71st St., Brooklyn, N. Y.
- JAMES W. MULLOY
121-02 87th Ave., Richmond Hill, N. Y.
- THOMAS C. MURPHY
481 E. 87th St., New York City
- JOSEPH M. NOVODVORSKY
202 Cherry St., New York City
- CAEL F. OLSEN
142 Goldens Ave., Newark, N. J.
- EDWIN M. O'NEILL
481 E. 124th St., New York City
- JOSEPH HUGH O'NEILL, JR.
515 Ridgewood Ave., Brooklyn, N. Y.
- ANTHONY A. PABLE
88 Cullen Ave., Clinton, N. J.
- ALEX. ROBERT FAILEX
22 Elsie St., Woodside, L. I., N. Y.
- NICHOLAS PETROFF
Fors Ave., Dunstable, New York City
- EDW. A. PHILLAN
121 Twiss Ave., Jersey City, N. J.
- LEONARD C. PLANTER
74 Norman Ave., E. Orange, N. J.
- LOUIS BERNARD PONY
112 W. 100th St., New York City
- NIKOLAI POPPEL
242 E. 101st St., New York City
- FRANK POSPISIL
223 E. 102nd St., New York City
- EDWARD POWERS
228 E. 120th St., New York City
- FRED J. RAILE
1743 Park Ave., New York City
- WILLIAM J. REILLY
227 E. 10th St., Brooklyn, N. Y.
- RALPH HENRY RICKS
68 Columbia Ave., Newark, N. J.
- WILLIAM LOUIS ROBERT, JR.
2210 Eastchester Road, New York City
- CHARLES ROSENBERG
204 E. 100th St., New York City

ELECTRICAL ENGINEERING—1928 (Continued)

- JOHN HAROLD BORN
2221 Palmetto St., Brooklyn, N. Y.
JOHN J. KOWAN
200 E. 79th St., New York City
CHARLES J. RUDOLPH
202 W. 224th St., New York City
RAYMOND W. ELSON
872 Hudson Place, Hudson Heights, N. Y.
HAROLD JOHN RYAN
214 W. 117th St., New York City
EDWARD J. BACKMAN
220 Van Brunt St., Brooklyn, N. Y.
WILLIAM SCHREIBER
1178 Chap. Ave., New York City
ABRAHAM KHAPIO
181 Parrott St., Brooklyn, N. Y.
THOMAS SHAW
2122 Kew-Forest Ave., New York City
JOHN P. WIGLEY
251 E. 40th St., New York City
SCOTT SPENCER
170 Franklin St., Brooklyn, N. Y.
SYLVESTER SPITALENI
110 E. 212th St., New York City

- BENJAMIN STERN
1830 Madison Ave., New York City
ALFRED WILLIAM STONE
244 Hudson Ave., Union Sq., N. Y.
HENRY A. STRICH
128 Canaan St., New York City
HUGO SUTOR
1223 Third Ave., New York City
HENRY CLARK
481 Seventh Ave., Brooklyn, N. Y.
MAX WEINSTEIN
1218 St. Marks Ave., Brooklyn, N. Y.
EDWARD WETS
422 E. 149th St., New York City
ALBERT WERTHEIMER
417 Chevermont Parkway, New York City
NILS GUSTAV WILLES
294 N. 11th St., Newark, N. J.
RAYMOND WINTER
181 President St., Passaic, N. J.
JOHN M. WINTER
Y. N. C. A., 1034 & Fifth Ave., New York City
CHARLES WOLF
4617 29th Ave., Brooklyn, N. Y.

GENERAL SCIENCE—1928

- WILTON ABRAHAMSON
712 Jonathan St., New York City
THOMAS ANDERSON
70 N. Junction Ave., Corona, L. I., N. Y.
MAX ALPERIN
144 Birlington St., New York City
HAROLD E. BARNETT
104 E. 24th St., New York City
NATHAN BIRNBAUM
47 Bristol St., Brooklyn, N. Y.
NATHAN D. BROOKSIN
1222 Kew-Forest Ave., New York City
SIDNEY H. BROWN
1415 Ave. Ave., New York City
MORRIS A. BUNNIN
228 Hunter St., New York City
JAMES H. COLLINS
255 Barton St., Jersey City, N. J.
EDWIN H. DARTER
28 Charles St., Bloomfield, N. J.
ARTHUR E. DE CARO
724 Greenwood Ave., Brooklyn, N. Y.
NICHOLAS DE MATO
418 E. 114th St., New York City
ELMER W. DUNCANSON
87 W. Fourth St., Bayonne, N. J.
WALTER FIDELICH
8022 Metropolitan Ave., Forest Hills, L. I., N. Y.
THOMAS F. GILLIGAN
2025 Balaubridge Ave., New York City
HUGOLF GOTTFRIED
212 W. 114th St., New York City
CHARLES A. GRAMLING
210 Eighth Ave., Astoria, L. I., N. Y.
SIEGFRIED HOPMANN
440 E. 29th St., New York City
JAMES F. HUVAKE
1024 University Ave., New York City
BENJAMIN KATCHER
191 Decker St., Brooklyn, N. Y.
WILLIAM KATZIN
1929 14th St., Brooklyn, N. Y.
ADRIAN J. KELLEY
28 E. Kingsbridge Road, New York City

- C. GEO. KEDDER
294 Canaan St., Jersey City, N. J.
JOSEPH L. LUBITZ
281 Holmberg Ave., Astoria, L. I., N. Y.
WILLIAM J. MAHON
1911 White Plains Ave., New York City
H. G. MARKIN
40 E. 30th St., New York City
CHARLES A. MARTIN
190 40th St., Brooklyn, N. Y.
CHARLES NOKE
172 Putnam Ave., Brooklyn, N. Y.
CHESTER NUKLER
147 Putnam Ave., Newark, N. J.
H. B. MOONLITH
84 W. 32d St., Newark, N. J.
JOSEPH C. MONTGOMERY
84 Birchfield St., Brooklyn, N. Y.
CHARLES P. NABHILI
281 Eighth Ave., New York City
CARL A. PETERSON
875 Lexington Ave., New York City
MICHAEL PRZESANSKY
1981 Park Place, Brooklyn, N. Y.
WM. C. PUDER
475 Greene Ave., Brooklyn, N. Y.
J. D. RICHMOND
1022 Bergen St., Brooklyn, N. Y.
SAM. E. RUBINOFF
27 Stratford Place, Newark, N. J.
ROBERT SALMONSON
49 Linden St., Brooklyn, N. Y.
FRANK C. SCHLINDWEIN
1413 Hudson Blvd., Jersey City, N. J.
LOUIS SOLOMON
32 E. 30th St., New York City
VICTOR TURNER
1142 17th St., Brooklyn, N. Y.
LEONARD VIETH
122 E. 117th St., New York City
HARRY L. VOGEL
1818 Madison Ave., New York City
H. KARAFU
128 Second Ave., New York City

GENERAL SCIENCE—1925

- A. BAUMAN
222 W. 110th St., New York City
- EDWARD BOEHM
1402 Myford Place, New York City
- ABRAHAM BELTZER
1205 Doughty St., Brooklyn, N. Y.
- OTTO F. BLOMSTEDT
424 Audubon Ave., New York City
- SAMUEL BLUMBERG
102 Lexington Ave., Brooklyn, N. Y.
- A. BRIDGER
400 E. 84th St., New York City
- JOSEPH BRODY
1218 Eastwood Ave., Brooklyn, N. Y.
- FRANCIS P. CARRUTY
2000 Manor Ave., New York City
- OSCAR COHEN
412 Elmhurst St., West New York, N. J.
- CECILE I. DAYTON
49 St. Nicholas Place, New York City
- ROBERT W. DEMONTE
202 Commonwealth Ave., Jersey City, N. J.
- ALMUKL R. DONNELLY
49 Wilson Ave., Larchmont, N. Y.
- DANIEL E. DONNELLY
224 E. 107th St., New York City
- AUGUSTUS B. FLECK
278 Manor Ave., Westchester, L. I., N. Y.
- GEORGE FRIED
42 Synagogue St., Newark, N. J.
- CHARLES FRUEHAN
214 W. 22d St., New York City
- WM. C. GELMAN
243 E. 40th St., New York City
- ROBERT GREENWALD
212 E. 10th St., New York City
- PHILIP G. GREISS
2340 Condit Ave., New York City
- WM. J. HARRIS
1105 Elipson St., New York City
- MOSES HAUSMAN
290 Newark St., New York City
- J. HERNOWITZ
130 E. 119th St., New York City
- HARRY HIXON
235 Elmhurst St., New York City
- NOAH HURWITZ
1875 Forest Ave., New York City
- ALPHONSE KAROLAK
80 Bedford St., New York City
- CHARLES W. KATZ
212 E. 87th St., New York City
- WM. PERRY KEARNEY
Englewood Cliffs, N. J.
- HARRY KESSLER
28 Fayette St., Brooklyn, N. Y.
- WM. W. KOPECK
2228 Tarehall Ave., New York City
- MAX KRANTZ
408 Cherry St., New York City
- FRANK LAMLA
4406 10th St., Brooklyn, N. Y.
- JOSEPH LICO
411 Bergrath Ave., West Hoboken, N. J.
- WM. LAND
420 E. 33d St., New York City
- FRANKLIN A. LEHMANN
2148 Creston Ave., New York City
- NATHAN LEWIS
48 E. 80th St., New York City
- CHARLES LICHTENSTEIN
2214 10th St., Brooklyn, N. Y.
- ALBERT E. LOBECK
Barneth, N. J.
- NATHAN LUDWIG
800 Gates Ave., Brooklyn, N. Y.
- LUDWIG MACE
481 E. 34d St., New York City
- PHILIP MALLORE
P. O. Box 21, Kew-Forest Heights, Conn.
- PETER MANRAH
21 Leffing St., Corona, L. I., N. Y.
- SALEM MIRAROF
1904 Belmont St., New York City
- JOSEPH MATOSCHIK
200 E. 10th St., New York City
- LELAND H. MCCANN
474 Lafayette Ave., Hawthorne, N. J.
- ALFRED MINERVA
1097 Third Ave., New York City
- NATHAN MITTAG
442 Myrtle Ave., Brooklyn, N. Y.
- JULIUS MINOHEIM
1122 Washington Ave., New York City
- MOHRIE MOSHEE
212 Highland Ave., Brooklyn, N. Y.
- GUSTAV MORTENSON
77 Oakhurst Ave., Great Neck, N. J.
- HERBERT MURPHY
443 West St., West Hoboken, N. J.
- YVES A. NARGELI
217 Elmhurst Ave., Long Island City, N. Y.
- SIDNEY OCHA
190 E. 10th St., New York City
- WM. ALBERT PAGELOW
8 Eastover Ave., Jersey City, N. J.
- JOHN PATRINO
400 Seventh Ave., Brooklyn, N. Y.
- CHARLES W. RITSCHER
82 Washington St., Hoboken, N. J.
- MAX ROCH
224 E. 84th St., New York City
- EMANUEL ROSENTHAL
88 Third St., Brooklyn, N. Y.
- MATTHEW RUSSO
272 Madison St., New York City
- MICHAEL SANDS
1231 Lafayette Ave., Brooklyn, N. Y.
- JACOB SCHIFF
187 Southview Ave., Brooklyn, N. Y.
- SAM SCHIFFER
2219 40th St., Brooklyn, N. Y.
- JOHN E. SCHNEIDER
212 Union Ave., Mt. Vernon, N. Y.
- INDORN SCHULLEN
2009 13th Ave., Brooklyn, N. Y.
- EDWARD A. SCHWEDLER
449 10th St., West New York, N. J.
- SAMUEL SINGER
143 Norfolk St., New York City
- HARRY S. SPANGENBERGER
2006 Park Ave., New York City
- GEORGE WM. SUSAN
12 Summit Ave., Newark, N. J.
- B. Y. TICE
190 Leffing Ave., Roseland, N. J.
- IRVING TOEMEL
11 Hartley Place, Bayonne, N. J.
- ERICH TWARONCHIK
1500 E. 40th St., Brooklyn, N. Y.
- A. VETIAN
1434 Creston Park E., New York City
- PAUL A. VOIGT
200-22 20th St., Queens Park, L. I., N. Y.
- THEODORE VON ZUEHL
443 W. 40th St., New York City
- FRANK E. WEISS
377 Sumner Ave., Newark, N. J.
- ELIE A. WILCKENS
24 Sumner St., Jersey City, N. J.
- GEORGE P. WILSON
2 W. 49th St., New York City
- J. WILKES
1881 Fells St., New York City
- LOUIS L. WURST
227 W. 140th St., New York City
- ADOLPH H. ZINK
320 E. 34d St., New York City

GENERAL SCIENCE—1926

- EMERIE ANGELES
196 Central Ave., New York City
HARRY H. BAGLEY
432 Baiton Ave., Bayside Heights, N. Y.
ALFRED W. BAKER
918 E. 22d St., Brooklyn, N. Y.
MAX BELITSKY
88 Monroe St., New York City
JAMES BLAKE
2912 W. 84th St., Coney Island, N. Y.
CECIL BLUMER
74 Leffert Ave., Bayside, L. I., N. Y.
ALBERT L. BOLTZAN
477 E. 86th St., New York City
THOMAS F. BROWN
48 10th St., Brooklyn, N. Y.
DAVID BRUNLOW
294 Cherry St., New York City
T. LEWIS BURNER
322 E. 22d St., New York City
PETER A. CANTY
1428 St. Lawrence Ave., New York City
CHARLES E. CERVENY
1 Fairmount Ave., Bingham, N. Y.
CLARENCE H. CHURCHMAN
228 E. 87th St., New York City
LEON COHEN
204 E. 10th Ave., Newark, N. J.
FRANCIS P. COLARANTO
415 4th St., West New York, N. J.
FLOYD CHAMBER
45 Van Wyck Ave., Jersey City, N. J.
ALBERT DELUNA
107 Bay 29th St., Brooklyn, N. Y.
LEONARD DENNICK
1044 W. 21st St., Philadelphia, N. J.
WILLIAM J. EHLERS
Washington Ave., Hempstead, L. I., N. Y.
HARRY FAIR
87 1/2 Lexington St., Newark, N. J.
NICHOLAS FARRIS
1220 E. 10th Ave., New York City
JAMES D. FAY
214 W. 10th St., New York City
FRED C. FISCHER
88 Webster Ave., Jersey City, N. J.
RICHARD K. FISCHER
804 E. 80th St., New York City
ERNEST A. FLINN
11 Brown St., Brooklyn, N. Y.
ADOLPH J. FORMAN
218 E. 11th St., New York City
ARTHUR FROOKS
161 Madison Ave., New York City
AMERIGO GENTILEZZA
224 E. 32d St., New York City
JAMES GERLIN
122 10th St., West New York, N. Y.
GEORGE B. GETTER
164 E. 80th St., New York City
IRVING GOLDBERG
287 Butler Ave., Brooklyn, N. Y.
ALEX. GOTTLEIN
13 Andrew St., Rossmore, N. J.
HAROLD H. GRAMLEN
200 Eighth Ave., Astoria, L. I., N. Y.
CHAR. J. GRUTNER
287 Princeton Ave., Brooklyn, N. Y.
WM. M. HAVESKY
1883 Hoboken Ave., New York City
ROGER E. HEINE
193 Bathurst St., Garden City, L. I., N. Y.
ISAAC J. HELFENBEIN
1842 Butler Ave., Brooklyn, N. Y.
JOSEPH HODGE
448 Palisades Ave., Rockville, N. J.
SAMUEL HODOWITZ
118 E. 11th St., New York City
JOSEPH JANOWSKY
204 Union Ave., Astoria, L. I., N. Y.
S. KARP
782 Bronx Place, New York City
MICHAEL KARPCHUK
428 E. 12th St., New York City
R. PERRY KILBY
430 W. Grand St., Elizabeth, N. J.
PAUL P. KOFF
208 Lafayette Ave., Brooklyn, N. Y.
CHARLES KUNOLD
1307 Avenue A., New York City
RICHARD LANE
824 E. 10th St., Paterson, N. J.
PHILIP E. LEXRO
288 Blodgett St., New York City
RALPH E. LOWE
140 Preston St., Highland Park, N. J.
GEORGE LUCENKE
274 Hubert St., Astoria, L. I., N. Y.
S. M. MARTIN
177 E. Third St., New York City
SAMUEL MANKER, JR.
1833 Madison Ave., Paterson, N. J.
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11 Hubert Place, Garfield, N. J.
WILLIAM F. MCCORMICK
102 Jennings St., Elizabeth, L. I., N. Y.
J. T. McPHERLAND
204 W. 12th St., New York City
JOSEPH MISCHKE
122 E. 80th St., New York City
JAMES MONTGOMERY
404 E. 80th St., New York City
ARTHUR J. MOONEY
428 E. 10th St., New York City
V. NOVICHOVITCH
892 Kensington St., Brooklyn, N. Y.
M. NICHMANOWITZ
1841 Washington Ave., New York City
BOY T. NIELSEN
270 Oak St., Perth Amboy, N. J.
HARRY J. NORWALK
400 E. 80th St., New York City
JAMES S. O'CONNELL
405 Market St., Paterson, N. J.
I. B. PACKMAN
214 N. Eighth Ave., Mt. Vernon, N. Y.
MONSIEUR PARGH
219 E. 10th St., New York City
JOHN C. PARRY
240 First Ave., New York City
MATTHEW PENNER
216 Lexington St., New York City
FRED F. PHILIPP
812 10th St., Bayside, L. I., N. Y.
CHAR. F. POSPISIL
400 E. 21st St., New York City
CHAR. POWELL
471 20th St., Brooklyn, N. Y.
DON RAMPOLLA
188 Boulevard, Danbury, N. J.
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2284 Marion Ave., New York City
ERNEST REUTER
127 W. 10th St., New York City
CHRISTIAN J. ROHRICH
74 Ann St., Newark, N. J.
HERMAN ROSCHLAU
169 10th Ave., New York City
JOHN A. ROULTON
212 W. 80th St., New York City
JOSEPH E. RUSSELL
121 Columbia St., Brooklyn, N. Y.
FRANK C. RYDER
149 Stuyvesant St., Brooklyn, N. Y.
LEWIS E. SCHATTER
224 Broadhead St., Brooklyn, N. Y.
H. SCHERER
71 Second Ave., New York City
BENJAMIN SCHNAPP
192 Riverside Ave., Brooklyn, N. Y.
JULIUS W. SCHRIEDER
5112 10th Ave., Brooklyn, N. Y.
ABRAHAM SCHWARTZ
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GENERAL SCIENCE—1926 (Continued)

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211 Beers Ave., New York City
SAMUEL STACKELL
122 E. Fourth St., New York City
WILLIAM H. STALMUTH
2292 Atlantic Ave., New York City
HARRY WM. STUBER
211 Chambers St., West Hoboken, N. J.
CHAR. B. SWERT
700 W. 170th St., New York City
ARCHIE TENNENBERG
1001 Third Ave., Brooklyn, N. Y.
EVALD THEILHEIM
2000 Kew-Forest Ave., New York City
JOSEPH VALENTI
24 Richmond St., Newark, N. J.
VINCENT VERTECCI
214 Second St., Jersey City, N. J.
ESTHER VILLENKUYA
202 E. 120th St., New York City
HENDERT E. WANDERER
125 10th St., Brooklyn, N. Y.
WALTER WEICHSEL
22 Government Place, New York City
JAMES H. WILSON
212 Elm St., Newark, N. J.
SAM WINTERBERG
431 Palisade Ave., West New York, N. J.
HESC ABRAHAM KINPT
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ALEXANDER EHLER
121 Bay 20th St., Brooklyn, N. Y.

GENERAL SCIENCE—1927

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JOHN ARMBRUSTER
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ANDREW S. BAUMET
26 Second Place, London, N. Y.
FREDERICK T. BELA
1042 Third Ave., New York City
BENJAMIN BERGER
128 Cayuga St., New York City
MAX BILLIG
2823 W. 20th St., Coney Island, N. Y.
JOHN C. BLESI
211 Eighth Ave., Newark, N. J.
BENJAMIN BLOOM
217 Grove Ave., Brooklyn, N. Y.
JOSEPH P. BRADY
428 E. 27th St., New York City
SAMUEL BRONSTEIN
204 Blake Ave., Brooklyn, N. Y.
FREDERICK T. BROWN
20241 125th St., Woodhaven, L. I., N. Y.
HENRI A. CAPDEVIELLE
212 W. 17th St., New York City
ALFRED E. CARKET
2244 Third Ave., New York City
LUCIAN J. CAVAGNET
248 W. 20th St., New York City
SOLOMON CHESLER
2967 W. 20th St., Coney Island, N. Y.
PAUL C. CLEMENTI
42 W. 24th St., New York City
FRED. COLOGNA
2044 2nd Ave., Brooklyn, N. Y.
JOHN COMMONS
242 Morris Ave., New York City
ANTHUR J. COOK
202 St. Rose Place, New York City
EDWARD CUNY
121 Prospect St., Jersey City, N. J.
MICHAEL M. DANKO
2 E. Third St., New York City
GERD. DEVAKIANKE
222 E. 20th St., New York City
WARREN DOW
272 E. 10th St., Paterson, N. J.
EDWIN M. DUFUR
722 Burke Ave., Brooklyn, N. Y.
BENJAMIN A. DURAN
222 E. 27th St., New York City
JOHN A. EPIFANIA
104 W. Houston St., New York City
AMERIGO THOS. ERMINI
1014 Third Ave., New York City
IGNATIUS FALKENHEIM
117 Taylor St., Brooklyn, N. Y.
CLIFFORD C. FENWICK
222 Warren St., Jersey City, N. J.
ELMER W. FICKENSCHER
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ABRAHAM FISHER
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JOSEPH FOGGERS
1026 E. 10th St., Brooklyn, N. Y.
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224 May Ave., New York City
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2 E. 10th St., New York City
THOMAS A. GILLESPIE
122 Flushing Ave., Astoria, L. I., N. Y.
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2018 Albany Crescent, New York City
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294 Birds St., Brooklyn, N. Y.
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120 Chester St., Brooklyn, N. Y.
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OTTO A. KNIPPING
201 Madison St., Hoboken, N. J.
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22-27 Nassau St., Brooklyn, N. Y.
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24 Wave St., Stapleton, S. I., N. Y.
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HANS LAXENYEGGER
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128 W. 117th St., New York City
LEWIS LEVINE
1278 Bristol St., New York City
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112 Willow Ave., Hoboken, N. J.
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24 Retreat St., West New York, N. J.
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1274 Bushwick Parkway, Brooklyn, N. Y.
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491 York Ave., New York City
JOHN J. MURRAY
184 W. 49th St., Bayside, N. Y.
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45 Ten Danten Ave., Passaic, N. J.
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293 W. 44th St., New York City
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149 E. 78th St., New York City
- EMERY PATARI
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1 Albert Ave., Corona, L. I., N. Y.
WILLIAM T. PETERSEN
343 E. 22d St., New York City
JOSEPH PICCUCI
676 17th St., Brooklyn, N. Y.
HERMAN H. QUENT
337 Channing St., Brooklyn, N. Y.
DAVID RAPOPORT
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JOHN REHRAUER, JR.
210 Violet St., West Hoboken, N. J.
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408 St. Marks Ave., Brooklyn, N. Y.
JOSEPH REINHARDT
27 Chestnut Ave., Danforth, N. Y., N. Y.
ABRAHAM ROSENBAUM
219 E. 77th St., New York City
ROBERT ROSE
423 E. 75th St., New York City
CHAR. RUBY
2444 Meeker St., Brooklyn, N. Y.
RUDOLPH SMUTNY
493 Elmhurst Ave., Astoria, L. I., N. Y.
VIGO SUNDEN
1144 124th St., Bayside, L. I., N. Y.
JOHN WALSH
1927 84th St., Brooklyn, N. Y.
J. P. WILDMANN
123 E. 24th St., New York City
JAMES F. WILLEY
111 W. 17th St., New York City

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BARNESPOD M. ALEXANDER
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HECTOR J. AQUILINO
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LEONARD ASH
Woodside Ave., Woodside, L. I.
WILLIAM THOMAS ALCUTT
414 W. 127th St., New York City
SYLVESTER D. BASSO
164 MacDougal St., New York City
THEODORE BLACK
317 E. 21st St., New York City
FRED BLASSE
1714 Madison St., Brooklyn, N. Y.
WILLIAM K. BLOOM
1518 Lexington Ave., New York City
DAVID H. BOWEN
204 E. 89th St., New York City
SAMUEL BRADSHAW
1787 Calverton Ave., New York City
GEORGE S. BRAED
318 E. 84th St., New York City
PETER VINCENT BRUNCK
608 River Terrace, Hoboken, N. J.
THOMAS JOHN BUNCLARKILL
410 Tyler Place, West New York, N. J.
FRANK BUCHERATI
314 E. 87th St., New York City
JOHN BURNS
229 Virginia Ave., Jersey City, N. J.
JOSEPH L. CAGNANI
1108 E. 179th St., New York City
JAMES D. CARROLL
1441 Linden St., Brooklyn, N. Y.
WALTER O. CHRISTOFFERSEN
230 1/2 Elmhurst St., Jersey City, N. J.
HUGH CLIFFORD CLARKE
212 Clark St., Jersey City, N. J.
WILLIAM A. CODY
48 Hope Ave., Staten Island, N. Y.
WILLIAM A. COHEN
48 E. 104th St., New York City
- ROBERT E. CROSSON
124 St. Pauls Ave., Staten Island, N. Y.
JOHN CROWLEY
200 Wills Ave., New York City
FLOYD A. DE HAET
283 N. 14th St., East Orange, N. J.
S. DEL BOUTBOU
221 W. 119th St., New York City
JOSEPH DI MARIA
113 Gathman Place, Brooklyn, N. Y.
MYLES DOLAN
1927 E. 22nd St., New York City
GUSTAV DONIBO
121 Cooper St., Brooklyn, N. Y.
WALTER H. DOYLE
221 E. 19th St., New York City
FRANCIS DWORAK
2140 Washington Ave., New York City
ROMAN HIEBERYNSKI
162 Elmhurst St., Astoria, N. Y.
MATTHEW EICHEL
193 W. 84th St., New York City
MORRIS ELKIN
222 W. 134th St., New York City
JAMES FERRIS, JR.
1 Eastman Place, Jersey City, N. J.
GEORGE J. FISCHER
133 E. 84th St., New York City
SIDNEY B. FISHER
272 Evergreen Ave., Brooklyn, N. Y.
CARLETON A. FRENCH
210 W. 149th St., New York City
STEPHEN FRIEDEN
29 W. 80th St., New York City
MAX FRIEDMAN
1641 41st St., Brooklyn, N. Y.
HERMAN FROBER
273 E. 11th St., New York City
STEPHEN GARDELLA
101 Caruso Ave., Corona, L. I., N. Y.
SOLOMON GENDEROVSKY
21 Atlantic St., Jersey City, N. J.
JAMES GEORGINA
48 Marie St., Jersey City, N. J.

GENERAL SCIENCE—1928 (Continued)

- FRED WM. GIERKING
122 E. 32nd St., Brooklyn, N. Y.
DANIEL GILLOIS
241 E. 14th St., Brooklyn, N. Y.
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178 Marlboro St., Brooklyn, N. Y.
ARTHUR GLUCK
411 E. 129th St., New York City
WILLIAM GRAHAM
101 Fleet St., Harrison, N. Y.
LOUIS O. GRANTLING
218 Eighth Ave., Astoria, L. I., N. Y.
JACOBUS P. GROESBEKDYKE
247 Terrace Place, Landover, N. Y.
HERBERT GROENING
27 Ross Ave., Ocean Park, L. I., N. Y.
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4114 189th Ave., Woodhull, L. I., N. Y.
KENNY HICKORY
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FRANK HANACK
494 Lexington Ave., Brooklyn, N. Y.
HENRY HARNES, JR.
112 Madison Ave., Chilton, N. J.
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221 Ego Ave., Jersey City, N. J.
IVAN IVANSON
510 W. 17th St., New York City
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HENRY KLEIN
147 E. 29th St., New York City
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274 Bergen Ave., Jersey City, N. J.
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212 Avenue N, Brooklyn, N. Y.
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420 48th St., Brooklyn, N. Y.
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409 79th St., Brooklyn, N. Y.
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JOSEPH J. ORTALLI
2174 Belmont Ave., New York City
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214 Nichols Ave., Brooklyn, N. Y.
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Freemont St., Harrison, N. Y.
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RALPH PETROWSKY
172 E. 189th St., New York City
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274 E. 12th St., Brooklyn, N. Y.
WM. C. PHILLIPS
242 McEwenough St., Brooklyn, N. Y.
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JOSEPH ROFMAN
227 Menorah St., Brooklyn, N. Y.
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IRVING ROSENBERG
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HAROLD SAPIRO
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GENERAL SCIENCE—1928 (Continued)

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KENNETH E. SWALWELL
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FRANK TERNER
849 E. 142d St., New York City
ALEX. THIELHEIM
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ALFRED TODARO
218 E. 122d St., New York City
PETER TORRACO
146 Boston Ave., Jersey City, N. J.
J. TRACHTENBERG
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21 Maple Parkway, Bar Harbor, E. I., N. Y.

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ALBERT WEISS
224 Lewis St., Caines 190, N. J.
ABRAHAM WEINBAUM
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JACOB WEINBERG
19 E. 104th St., New York City
JOHN A. WEISS
229 125th St., Brooklyn, N. Y.
HENRY WENIG
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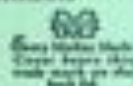
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